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Independent Evaluation of Comprehensive Primary Care Plus (CPC+):

Second Annual Report

July 2020

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Independent Evaluation of Comprehensive Primary Care Plus (CPC+)

Second Annual Report

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ACRONYMS

ACO	Accountable Care Organization
BHI	behavioral health integration
CAHPS	Consumer Assessment of Healthcare Providers and Systems
CMF	care management fee
CMM	comprehensive medication management
CMS	Centers for Medicare & Medicaid Services
CPC+	Comprehensive Primary Care Plus
CPCP	Comprehensive Primary Care Payment
eCQM	electronic clinical quality measure
ED	emergency department
EHR	electronic health record
E&M	evaluation and management
FFS	fee-for-service
IT	information technology
MAPCP	Multi-payer Advanced Primary Care Practice
PBIP	Performance-based Incentive Payment
PBPM	per beneficiary per month
PCMH	patient-centered medical home
PFAC	Patient and Family Advisory Council
PMPM	per member per month
PY	Program Year
QI	quality improvement
RING	Regional Implementation Networking Group
SSP	Medicare Shared Savings Program

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INDEPENDENT EVALUATION OF CPC+:
Executive Summary of the Second Annual Report

Key takeaways

Drawing on the substantial supports received from the Centers for Medicare & Medicaid Services (CMS), payer partners, and health information technology (IT) vendors, participating primary care practices made meaningful changes to care delivery during the first two years of Comprehensive Primary Care Plus (CPC+). Still, practices have more work to do in the remaining three years to further improve the quality of care they provide, and indicated that additional support would help them to do so. There were a few, very small impacts of CPC+ on Medicare fee-for-service (FFS) beneficiaries during the first two years, but it is too early to draw conclusions about the likely longer-term effects of CPC+.

1. Introduction

Overview of CPC+. CPC+ is the largest and most ambitious primary care payment and delivery reform effort tested to date in the United States. The Center for Medicare & Medicaid Innovation of CMS launched CPC+ in January 2017 in 14 regions. Four more regions were added in January 2018. Across these 18 regions, CMS partnered with 79 payers and 68 health IT vendors to support 3,070 primary care practices' efforts to improve the care they provide to over 17 million patients. In all 18 regions, CPC+ will run for five years.

Through CPC+, CMS is testing the idea that multipayer payment reform, robust learning supports, actionable data feedback, and health IT vendor support will enable primary care practices to transform how they deliver care. To provide a framework for transformation, CMS offers CPC+ practices a set of care delivery requirements, which get progressively more advanced over the five intervention years, with the aim to improve care delivery across five Comprehensive Primary Care Functions: (1) access and continuity, (2) care management, (3) comprehensiveness and coordination, (4) patient and caregiver engagement, and (5) planned care and population health.

The 3,070 primary care practices that joined CPC+ fell approximately evenly into two CPC+ tracks with different levels of care delivery requirements. Track 2 practices are required to provide more enhanced care delivery approaches to better support patients with complex needs. They receive additional financial support and a greater shift from FFS toward population-based payment. These payments support the expanded breadth and depth of services that Track 2 practices are required to provide and give them the flexibility to deliver care in ways that may better address patients' needs and align with their preferences for care.

CMS hypothesizes that practices in both tracks will improve the way they deliver care. This transformation is expected to improve access to primary care services and the quality and efficiency of the care patients receive, changes that are intended to produce better health outcomes for patients at a lower cost. If CPC+ reduces spending without reducing the quality of care patients receive, or improves the quality of care without increasing spending, the Secretary

of the Department of Health and Human Services has the authority to expand the scope and duration of CPC+.

Focus for this report. The findings in this report provide a rigorous, independent evaluation of CPC+ in its first two program years. Given the complexity of primary care practice transformation, we did not expect to see favorable effects of CPC+ on Medicare expenditures for FFS beneficiaries after only two years of the five-year model. If CPC+ is successful, at this stage, we might expect to see improvements in quality-of-care indicators and utilization measures that primary care can affect in the short to medium term (such as emergency department [ED] visits, process-of-care measures for patients with diabetes, or patient-reported access to care). Thus, in this report, we focus on the implementation of CPC+ in regions that started in 2017, and also report early impacts in these regions. We focus on Program Year (PY) 2, highlighting new findings and changes from PY 1. Future reports will cover the remaining three years of CPC+ and additional research questions.

2. CPC+ participation and partnership

In 2017, 71 payer partners and 66 health IT vendors joined with CMS to support 2,905 diverse practices in 14 regions. Over the first two years, payer partner and practice involvement remained substantial and mostly stable, with over 90 percent of these payer partners and practices still involved at the end of PY 2.

The payer partners that have joined CMS in CPC+ include private health insurance companies and state Medicaid agencies.

CPC+ practices range from small (one to two practitioners) to large (six or more practitioners); include independent and system-owned practices; are located in rural, urban, and suburban areas; and have varying levels of prior transformation experience. About one-half of CPC+ practices also belong to an Accountable Care Organization (ACO) that participates in CMS' Medicare Shared Savings Program, which incentivizes providers (such as primary care practices, specialists, and hospitals) to work together to reduce Medicare FFS expenditures.

3. Payer and health IT vendor support

CMS and payer partners continued to provide CPC+ practices with significant support in the form of enhanced and alternative payments, data feedback, and learning activities in PY 2.

- **Enhanced payments.** CMS and all payer partners provided enhanced payments to CPC+ practices that they had contracts with, in addition to usual payments for services. In PY 2, practices received median enhanced payments of approximately $122,000 per Track 1 practice and $264,000 per Track 2 practice. These payments represented a median of 10 percent of Track 1 practices' total revenue and 15 percent of Track 2 practices' total revenue for PY 2. Median payments for Track 2 practices were higher than for Track 1 practices because CMS and about one-half of payer partners met their commitment to provide Track 2 practices with larger payments to reflect their more advanced care delivery requirements.

Ninety percent of enhanced payments in PY 2 were paid to practices for participating in CPC+, most commonly in the form of care management fees. The remaining 10 percent were payments to CPC+ practices or their ACOs for reducing costs or utilization and/or improving quality.

Two-thirds of the enhanced payments in PY 2 were new funding for CPC+ practices, whereas the remaining one-third of the enhanced payments were available to at least some practices before CPC+ began. CMS provided 94 percent of the new funding for CPC+, and the remaining 6 percent of new funding came from payer partners.

- **Alternative payments**. CMS and payer partners agreed to use an alternative to the historically common FFS payment approach for Track 2 practices by the start of PY 2. Under FFS, practices are paid for each visit or service they provide. Under alternative approaches, payer partners provide lump sum payments to practices in advance. Correspondingly, payer partners reduce or eliminate FFS payments.

  However, only CMS and one-fifth of payer partners used an alternative to FFS approach in PY 2; this fell far short of CMS' goal that all payer partners do so.

- **Data feedback and learning support.** CMS and most payer partners also provided practices with data feedback and learning support. Payers refined those supports in PY 2 based on PY 1 feedback from practices, making these supports more useful to practices as they continued to implement changes in care delivery.

Health IT vendors helped CPC+ practices use their products to support the Comprehensive Primary Care Functions and, in some cases, added new functionalities to their products that Track 2 practices need to meet CPC+ requirements.

Practices' perspectives on supports. Practices reported using CPC+ supports to make beneficial changes to care delivery, though some practices also indicated that additional support would help them achieve the Comprehensive Primary Care Functions. Specifically, about one-half of practices indicated a need for additional payments and/or stronger health IT vendor support. Practices also noted a need for more timely and user-friendly data feedback. Furthermore, many practices did not try to earn payments for performance because these payments comprised a small proportion of total enhanced payments, and because the practices perceived that they had limited control over patients' health care utilization and spending.

4. CPC+ practice change

Practices' progress. In the first two years, practices actively embraced the hard work of CPC+ implementation and believed CPC+ improved the quality of care they provide. While there is still considerable work to do during the remaining three years of CPC+, as compared to PY 1, more practices reported that they:

- Had care management staff and processes in place to help patients with complex medical needs manage their conditions.
- Screened patients for unmet behavioral health and social service needs and started adding staff and putting structures in place to help address those needs.

- Improved coordination with hospitals, EDs, and specialists that see their patients.
- Followed up in a timely manner with their patients after they were seen by a hospital or ED.
- Had dedicated quality improvement (QI) staff who used evidence-based QI strategies.

Practices' areas for improvement. However, practices continued to face challenges when making some care delivery changes and new services did not reach all patients who would benefit from them in PY 2. Areas where practices still have the most room for improvement include:

- Providing longitudinal care management services to a larger proportion of their patients who are at higher risk, using an advanced strategy to identify those patients, and using care plans more fully to guide those services.
- Taking additional steps to more deeply integrate behavioral health, including developing workflows and processes and identifying and training staff.
- Helping patients set and "self-manage" or meet their own health goals.
- Offering alternatives to traditional office visits (such as group visits or home visits) to more patients.
- Improving coordination and communication with social service agencies.

5. Outcomes for Medicare FFS beneficiaries

Even with practices' progress with transformation, we did not expect to see favorable effects of CPC+ on Medicare expenditures after only two years of the five-year model. In line with these expectations, in the first two years, CPC+ had a few, very small favorable impacts on some measures of service use, quality of care, and patient experience. However, it increased Medicare expenditures for CPC+ practices (which included CMS' enhanced payments for CPC+ and SSP) by 2 to 3 percent, relative to similar practices that did not participate in CPC+.

- **Service use.** In the first two years, CPC+ had small effects on some measures of Medicare FFS service use of 1.3 percent or less. These included reducing the rate of ED visits and slowing the growth of ambulatory primary care visits for practices in both tracks, as well as increasing the rate of ambulatory specialty care visits for beneficiaries served by Track 1 practices. CPC+ did not impact the rate of acute hospitalizations.
- **Expenditures.** Findings from the first two years also indicate that CPC+ did not impact expenditures when excluding CMS' enhanced payments provided to CPC+ practices in addition to usual payments for services. CPC+ increased expenditures by 2 to 3 percent when including those payments.
- **Quality of care.** Small improvements of one percentage point or less occurred on selected claims-based quality measures, including increases in the percentage of beneficiaries who received various recommended services for diabetes, the percentage of female beneficiaries who received breast cancer screening, and the percentage of beneficiaries who received hospice services. CPC+ did not impact hospital readmission rates in the first two years.

- **Patient experience.** Compared to Medicare FFS beneficiaries in similar practices, in PY 2, beneficiaries served by CPC+ practices reported mostly similar experiences with most aspects of care. Exceptions were that beneficiaries served by Track 1 CPC+ practices reported that they received more timely follow-up after ED visits, and beneficiaries served by Track 2 practices reported more timely follow-up after hospital stays and more timely answers to their health-related questions from their primary care practice than beneficiaries in similar practices that were not participating in CPC+.

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1. INTRODUCTION

1.1. Overview of CPC+

Comprehensive Primary Care Plus (CPC+) is the largest and most ambitious national primary care payment and delivery reform effort tested to date. The Center for Medicare & Medicaid Innovation of the Centers for Medicare & Medicaid Services (CMS) launched CPC+ in January 2017. Through CPC+, CMS is testing the idea that multipayer payment reform, robust learning supports, actionable data feedback, and health IT vendor support foster primary care practice transformation. In turn, CMS hypothesizes that this transformation will improve access to primary care services and the quality and efficiency of the care patients receive. Ultimately, these changes are intended to produce better health outcomes for patients at a lower cost.

To provide a framework for transformation, CMS offers CPC+ practices a set of care delivery requirements, which get progressively more advanced over each of the five CPC+ Program Years (PYs). The requirements aim to improve care delivery in five Comprehensive Primary Care Functions:

Access and continuity requires practices to ensure the availability of health services when patients need and want them. It also encourages practices to create long-term, trusting relationships between patients and their primary care practitioner and/or care team.

Care management involves practices working closely with patients to proactively address their health care needs. Practices provide shorter-term "episodic" care management for patients who experience acute care events, such as emergency department (ED) visits or hospitalizations, and longer-term care management for patients with complex, ongoing needs. Services include supporting patients as they transition between care settings (such as from a hospital to their home), reviewing and reconciling patients' medications, and educating patients about their conditions and how to manage them.

Comprehensiveness and coordination refers to primary care practices' capacity to address most of their patients' medical, behavioral, and health-related social needs to help all patients meet their health goals. It also refers to the practices' central role in helping patients and caregivers navigate the health care system.

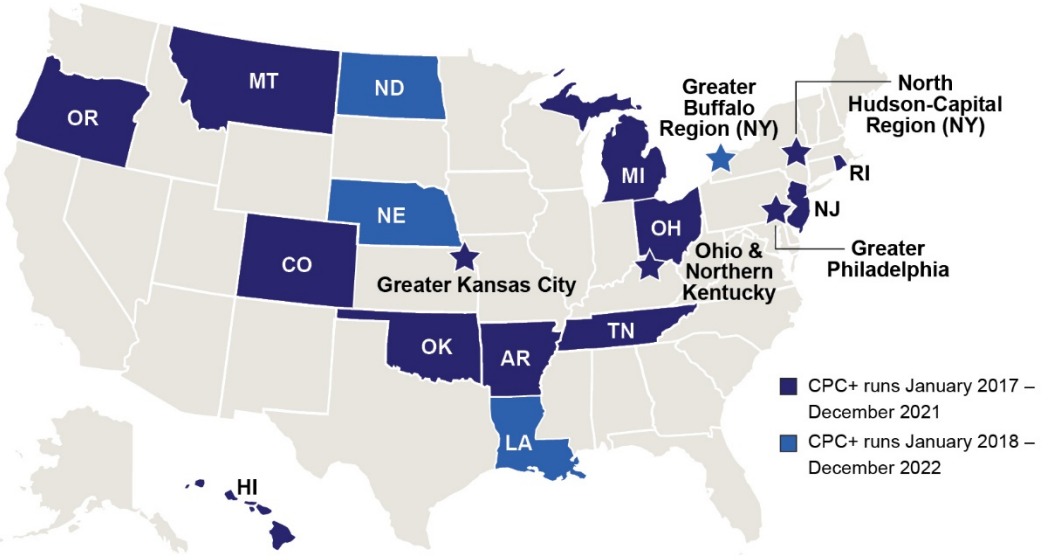
Patient and caregiver engagement requires practices to involve patients and caregivers in efforts to guide practice improvement. It also requires practices to enhance patients' willingness and ability to manage their own health care and engage patients in advance care planning so they can specify the care they would want to receive should they become unable to speak for themselves.

Planned care and population health refers to practices organizing health care delivery to meet the needs of all of their patients. It calls for practices to use data and team-based care to proactively identify the needs of their patients and efficiently manage their care.

CMS launched CPC+ in January 2017 in 14 regions and added 4 more regions in January 2018 (Figure 1.1). Across these 18 regions, CMS partnered with 79 payers to support 3,070 primary care practices' efforts to improve the care they provide to over 17 million patients. Sixty-eight health IT vendors formally partnered with CPC+ Track 2 practices to support their transformation efforts.

The 3,070 primary care practices fell approximately evenly into two CPC+ tracks with different levels of care delivery requirements. Track 2 practices are required to provide more enhanced care delivery approaches to better support patients with complex needs. They received additional financial support and a greater shift from fee-for-service (FFS) toward population-based payment. These payments support the expanded breadth and depth of services that Track 2 practices are required to provide and give them the flexibility to deliver care in ways that may better address patients' needs and align with their preferences for care.

Figure 1.1. CPC+ regions, payer partners, practices, and practitioners



Stakeholders involved in CPC+ in PY 1

2017 regions		2018 regions		Total	
Regions:	14	Regions:	4	Regions:	18
Payers:	71[a]	Payers:	8	Payers:	79
Practices:	2,905	Practices:	165	Practices:	3,070
Practitioners:	13,209	Practitioners:	1,135	Practitioners:	14,344
Patients:	16.3M	Patients:	1.1M	Patients:	17.4M
Health IT vendors:	66[b]	Health IT vendors:	8[b]	Health IT vendors:	68[b]

Source: Mathematica's analysis of 2017 and 2018 CPC+ practice and payer tracking data provided by CMS.

[a] Payer partners that operate in more than one region are counted separately for each region in which they participate. Seventy-one payers have partnered with CMS in the 14 original CPC+ regions. Sixty-three payers joined CPC+ in these regions in 2017 and eight more payers joined CPC+ in 2018.

[b] CMS requires Track 2 practices to use enhanced health IT functionalities to advance their work on CPC+. Track 2 practices partner with health IT vendors that committed to providing health IT functionalities and supporting practices in using them. In PY 1, 60 vendors partnered only with practices in 2017 regions, two only with practices in 2018 regions, and six with practices in both 2017 and 2018 regions.

PY = Program Year; M = million.

1.2. Overview of the independent evaluation

1.2.1. CPC+ evaluation logic model and focus for this report

Primary care practice transformation is a complex process that takes time to implement. Changes in care delivery also take time to manifest themselves in outcomes of interest, such as improving patients' health and reducing health care utilization and spending. The high-level evaluation logic model in Figure 1.2 depicts CPC+ components and the hypothesized relationships between model components and key outcomes such as reduced spending and improved quality of care. If the CPC+ model reduces spending without reducing the quality of care patients receive, or improves the quality of care without increasing spending, the Secretary of the Department of Health and Human Services has the authority to expand the scope and duration of CPC+.

The findings in this report provide a rigorous, independent evaluation of CPC+ in its first two program years, describing the experiences of payer partners, practices, health IT vendors, and patients in regions that started CPC+ in 2017. In particular, we focus on PY 2, highlighting new findings and changes from PY 1.[1]

Given the complexity of primary care practice transformation, we did not expect to see favorable effects of CPC+ implementation on Medicare expenditures after only two years of the five-year model. If the model is successful, at this stage, we might see improvements in quality-of-care indicators and utilization measures that primary care can affect in the short to medium term (such as ED visits, process-of-care measures for patients with diabetes, or patient-reported access to care).

Thus, in this report, we focus on the foundations of practice transformation in CPC+, including stakeholder involvement (Chapter 2), practice transformation supports (Chapter 3), and changes in care delivery (Chapter 4). We also track the early impacts of CPC+ on key claims-based outcomes, including costs, utilization, and quality of care, and survey-based patient-experience outcomes, for Medicare FFS beneficiaries (Chapter 5). Future reports will address research questions about the sustainability and spread of CPC+, and the potential effects of CPC+ on Medicaid FFS beneficiaries.

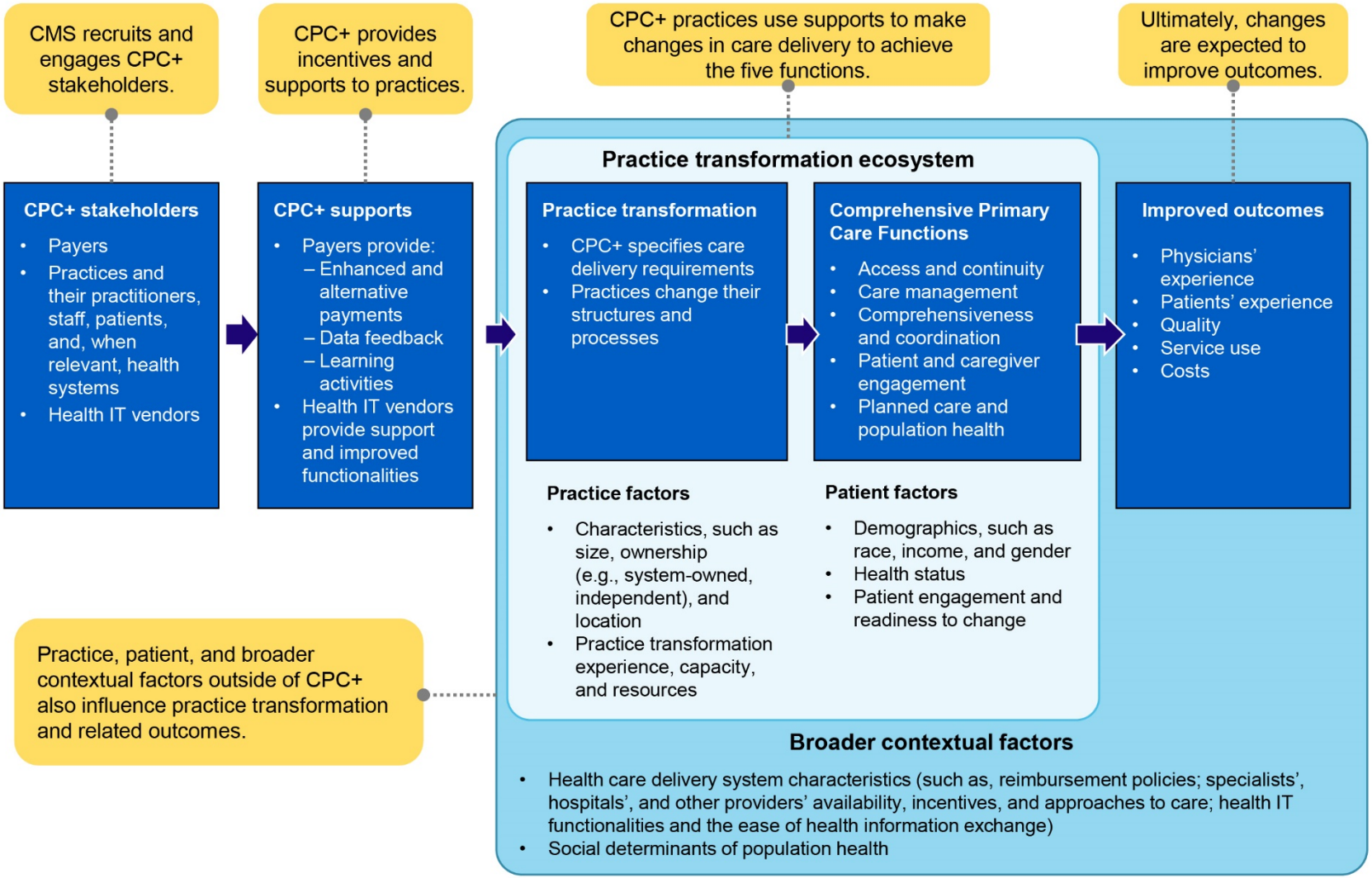
Want to learn more about CPC+?

The Second Annual Report Supplemental Volume (Petersen et al. 2020) and Appendices to the Supplemental Volume (Ghosh et al. 2020) provide additional information about the topics covered in this report. The supplemental volume also highlights findings from PY 1 for partners and participants in the 2018 regions.[1] The First Annual Report Supplemental Volume (Anglin et al. 2019) and Appendices to the Supplemental Volume (Peikes et al. 2019b) provide detailed information about PY 1 for the practices that joined CPC+ in 2017. Reports available at: https://innovation.cms.gov/initiatives/Comprehensive-Primary-Care-Plus

[1] Practices that joined CPC+ in 2018 account for only 5 percent of the total number of practices participating in CPC+. Our findings indicate that the first-year implementation experiences of practices and payer partners that joined CPC+ in 2018 were very similar to the first-year experiences of those that started in 2017. We also found that adding practices that began CPC+ in 2018 to the impact analysis for PY 1 did not change the findings.

Figure 1.2. Logic model for the CPC+ evaluation

This high-level evaluation logic model depicts the components of CPC+ and the hypothesized relationships between program elements and key outcomes. It indicates that the implementation and evaluation of CPC+ are occurring within a complex "practice transformation ecosystem" that also has the potential to affect outcomes.



1.2.2. CPC+ evaluation research questions and data sources

We designed our ongoing independent evaluation of CPC+ to understand the complex relationships depicted in the evaluation logic model. In this section, we describe the research questions (Table 1.1) and data sources (Table 1.2) used for the CPC+ evaluation. Throughout the report, we highlight additional details of our methods within callout boxes.

Table 1.1. Research questions for the independent evaluation of CPC+

Topic	Questions
Participation and Partnership	Which regions, payer partners, practices, and health IT vendors are involved in CPC+? When and why did they join or disenroll from CPC+? What characteristics distinguish them? How and why does involvement change over the course of CPC+?
Supports	What payment, data feedback, learning activities, and health IT support did CMS, CPC+ payer partners, and health IT vendors provide to practices? How did practices use these supports?
Changes in care delivery	How did practices (and for practices owned by a larger organization, their health system) change the way they delivered care, and what facilitated or impeded progress?
Effects	What were the effects on patients' experience; and quality, service use, and spending for attributed Medicare FFS beneficiaries and (when and where feasible) Medicaid FFS beneficiaries? How did CPC+ alter primary care physicians' experience? What factors account for the varying degrees of success in achieving CPC+ goals, or the speed with which participants reached these goals?
Sustainability and spread	To what extent will practices, health systems, payer partners, and health IT vendors sustain CPC+ after it ends? How is the model spreading to stakeholders that were not involved in CPC+?

Table 1.2. Data sources for the independent evaluation of CPC+

Data source	Description
CMS and payer partners' supports	
CPC+ Payer Survey[a]	In late PY 1 and late PY 2 (from October through December in 2017 and 2018, respectively), we administered the 2017 and 2018 CPC+ Payer Surveys, which provided insight into all payer partners' approaches to CPC+.
Interviews with CMS and payer partners	We interviewed CMS and all payer partners participating in PY 1 (in person from October to November 2017) and CMS and eight payer partners that made significant changes to their supports in PY 2 (by phone from October to November 2018). We asked payer partners about how they designed their CPC+ supports and the factors that helped or hindered their CPC+ work.
Health IT vendors' supports	
Interviews with a sample of health IT vendors	In late PY 1, we interviewed a diverse sample of 13 of the 66 health IT vendors participating in CPC+ (by phone from November to December 2017) about the support they provided to CPC+ practices. These vendors represented 83 percent of Track 2 practices in PY 1. We did not interview health IT vendors in 2018, so we do not have updated findings in this report for PY 2. We will provide an update on the PY 3 vendor experience in our third annual report.
CPC+ practices' progress, experiences, and perspectives on CPC+	
CPC+ Practice Survey[a]	We administered the 2017 CPC+ Practice Survey early in PY 1 (from March through September 2017) and the 2018 CPC+ Practice Survey in PY 2 (from June through September 2018). These surveys provide information about how all CPC+ practices perceived CPC+ and changed care delivery, using the modified Patient-Centered Medical Home Assessment (M2-PCMH-A).
Data that practices reported to CMS[a]	All practices reported to CMS how they were approaching care delivery following each quarter in PY 1 and PY 2, and their health IT vendor relationships and the financial support they receive from CPC+ payer partners at the end of PY 1 and PY 2. These data provide insight into (1) how practices approached the Comprehensive Primary Care Functions and related care delivery requirements and (2) the health IT and financial support they receive for that work.
Interviews with a representative sample of deep-dive practices	We conducted interviews with a diverse group of 59 practices (in person in March to May 2018 and by telephone in March to May 2019) about CPC+ in general and each of the CPC+ supports and Comprehensive Primary Care Functions. We also asked about two special topics each year: teamwork and use of specialists in 2018, and care plans and quality improvement in 2019.
Medicare FFS beneficiaries' expenditures, service use, quality of care, and experiences with care	
Medicare FFS claims data	We used Medicare FFS enrollment and claims data for up to four years before CPC+ began and during all years of the CPC+ model to select the comparison group and estimate the impacts of CPC+ on expenditures, utilization, and selected measures of quality of care for Medicare FFS beneficiaries.
CPC+ Beneficiary Survey[a]	We administered this survey by mail to a sample of Medicare FFS beneficiaries drawn from nearly all CPC+ practices and nearly three-quarters of the comparison practices in PY 2 (May through December 2018). These data provide insights into the experiences and perceptions of beneficiaries receiving care from CPC+ practices.

[a] Sample sizes vary slightly across figures and tables in the report due to survey and item nonresponse. We include the relevant sample size in the notes to each exhibit.

FFS = fee-for-service; IT = information technology; PY = Program Year.

2. CPC+ PARTICIPATION AND PARTNERSHIP: INVOLVEMENT IN CPC+ REMAINED SUBSTANTIAL IN PY 2

Key takeaways

In 2017, 71 payer partners and 66 health IT vendors joined CMS to support 2,905 diverse practices in 14 regions. Over the first two years, payer partner and practice involvement remained substantial and mostly stable, with over 90 percent of these payer partners and practices still involved at the end of PY 2. The payer partners that have joined CMS in CPC+ include private health insurance companies and state Medicaid agencies. While they differ from primary care practices that did not participate in the model, the CPC+ practices are diverse. They range from small (one to two practitioners) to large (six or more practitioners); include independent and system-owned practices; are located in rural, urban, and suburban areas; and have varying levels of prior transformation experience.

2.1. Payer partners

To bolster support for CPC+ practices, CMS partnered with other payers. Payer partners are entities—such as health insurance companies and governments—that pay providers for health care services.

Changes in payer partnership. Seventy-one payers have ever partnered with CMS in the 14 CPC+ regions that joined CPC+ in 2017.[2] Sixty-four of these payers were still partnering by the end of PY 2. The seven payers that discontinued their partnership were small, regional payers that attributed few or no lives to CPC+ practices. These payers cited various reasons for withdrawing, including a lack of return on investment, not having enough lives attributed to CPC+, and competing organizational priorities.

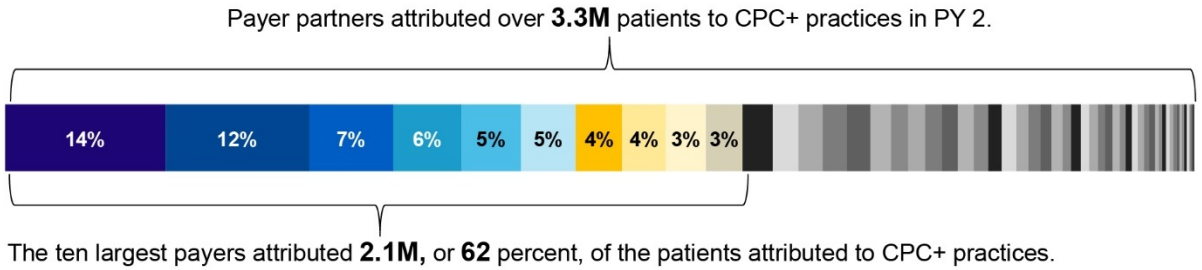
Payer partners' characteristics. Similar to PY 1, in PY 2, CPC+ payer partners included a mix of lines of business in CPC+—most commonly commercial and Medicaid managed care—and ranged in size. In PY 2, the 10 largest CPC+ payer partners each attributed[3] more than 100,000 patients to CPC+ practices, while the 21 smallest payer partners each attributed fewer than 10,000 lives to CPC+ practices. Together, the 10 largest payer partners accounted for nearly 2.1 million patients, or 62 percent of lives attributed by all payer partners in PY 2 (Figure 2.1).

[2] For the purposes of this evaluation, we count payers that operate in more than one region separately for each region in which they partner because some of these payer partners vary their CPC+ approach across regions. Using this approach, 71 payers have partnered with CMS in the 14 original CPC+ regions. Sixty-three payers joined CPC+ in these regions in 2017 and an additional eight payers joined in 2018.

[3] Payer partners attribute or assign patients to CPC+ practices (typically to the practice that provided the largest share of the patient's primary care visits) to determine the level of CPC+ payments each practice should receive.

Figure 2.1. Percentage of patients that payer partners attributed to CPC+ practices in PY 2

The 10 largest payer partners attributed **2.1 million,** or **62** percent, of the patients attributed to CPC+ practices by payer partners.



Source: Mathematica's analysis of 2017 and 2018 practice-reported financial data submitted to CMS.

Note: N = 2,715 CPC+ practices.

Each rectangle represents one payer partner. The width of each rectangle represents the number of patients attributed by the payer partner. Individual percentages may not sum to totals due to rounding.

PY = Program Year; M = million.

CPC+ participation and partnership in 2018 regions

In January 2018, CMS partnered with eight payers to start CPC+ in four new regions. These regions included three states (Louisiana, Nebraska, and North Dakota) and one partial state (Greater Buffalo, New York).

The 165 practices that joined CPC+ in these four new regions account for 5 percent of the total participating practices across all CPC+ regions. The 165 practices partnered with eight health IT vendors and served about 1.1 million patients in PY 1.

The supplemental volume to this report highlights findings from PY 1 for partners and participants in the 2018 regions in callout boxes marked with the 2018 regions icon. Our findings indicate that the first-year implementation experiences of practices and payer partners that joined CPC+ in 2018 were very similar to the first-year experiences of those that started in 2017. We also found that adding these practices to our impact analysis for PY 1 did not change our findings.

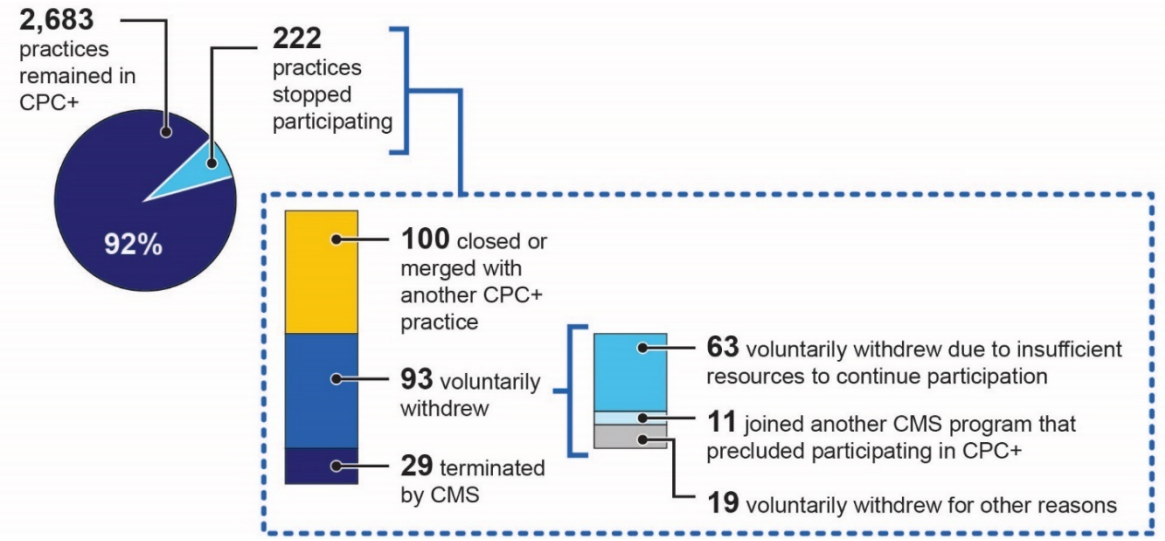
2.2. Practices

CMS invited practices that provide primary care within the selected regions to apply to participate in CPC+. Across the 14 regions that started CPC+ in 2017, 4,265 practices applied to participate in one of two CPC+ tracks. CMS accepted the 2,905 applicants that met CMS' requirements (which were slightly more advanced for Track 2) and which it felt had the best opportunity to transform and meet the goals of CPC+ based on their experience using health IT, their prior experience with practice transformation, and the proportion of their patients covered by participating payer partners, among other factors (Peikes et al. 2019a; Anglin et al. 2019). By chance (rather than by design), the 2,905 practices that were accepted fell approximately evenly into Tracks 1 and 2, and were fairly evenly split by whether or not they participated in the Medicare Shared Savings Program (SSP) as well as CPC+.

Changes in practice participation. Ninety-two percent (2,683) of the 2,905 practices that started CPC+ in 2017 were still participating at the end of PY 2. Of the 222 practices that left CPC+ by the end of the second program year, 93 voluntarily withdrew, 29 were terminated by CMS for failing to comply with CPC+ requirements, and 100 closed or merged with another CPC+ practice (Figure 2.2).

Figure 2.2. Reasons practices that joined CPC+ in 2017 stopped participating in PY 1 or PY 2

Close to half of the practices that stopped participating in CPC+ closed or merged with another CPC+ practice. The other half voluntarily withdrew, most commonly due to insufficient resources to continue participating, or were terminated by CMS.

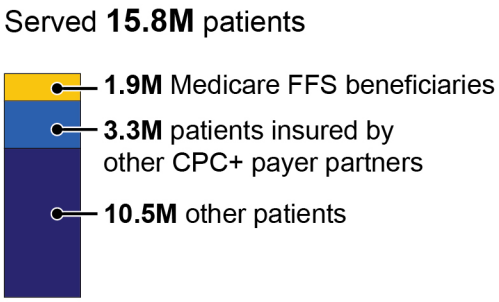


Source: Mathematica's analysis of 2017 and 2018 CPC+ practice tracking data provided by CMS.
Note: N = 2,905 CPC+ practices
PY = Program Year.

The practices participating at the end of PY 2 included 13,455 primary care practitioners and served approximately 15.8 million patients during PY 2. This includes about 1.9 million Medicare FFS beneficiaries and 3.3 million patients attributed to CPC+ practices by other payer partners (Figure 2.3). The remaining 10.5 million patients were uninsured, insured by non-partnering payers, or insured by partnering payers but attributed to a different practice.

Figure 2.3. Patients served by CPC+ practices in PY 2

CPC+ practices served **15.8 million** patients.



Source: Mathematica's analysis of 2017 and 2018 practice-reported financial data submitted to CMS.
Note: N = 2,715 CPC+ practices. Individual amounts may not add up to totals due to rounding.
PY = Program Year; M = million.

Closer look: Changes in CPC+ practice participation

Compared with practices that remained in CPC+, practices that voluntarily withdrew or were terminated by CMS were more likely to be in Track 1. They also were on average smaller, less likely to be owned by a hospital or health system, more likely to have participated in the Medicare Shared Savings Program (SSP), and less advanced in their self-reported approaches to care delivery at the start of CPC+.

Many practices that voluntarily withdrew from CPC+ reported that they struggled with insufficient resources (both payments and staff) to continue participating. In PY 1, CPC+ practices in both tracks received care management fees from CMS and other payers, in addition to usual payments for services, to support their participation in CPC+. Given CMS and some other payers vary their payments across tracks, we focused our analysis of payments on Track 1 practices (as they were more likely to exit).

Consistent with their smaller size, practices that withdrew from CPC+ received less CPC+ funding in PY 1. Track 1 practices that exited CPC+ received median care management fees totaling nearly $53,000 in PY 1, compared to over $90,000 for those that remained. To account for differences in practice size, we divided total care management fees to each practice by the practice's number of practitioners, and found that payments were more similar across the two groups. Practices that exited received a median of $27,601 per practitioner, compared to $32,599 per practitioner for those that remained. This suggests that the level of payment for the practice was a more important factor when exiting CPC+ than the level of payments per practitioner.

Practice characteristics. The 2,683 practices participating in CPC+ at the end of PY 2 were a diverse group. They ranged from small (one to two practitioners) to large (six or more practitioners); from independent to system-owned; were located in rural, urban, and suburban areas; and had varying levels of prior transformation experience.

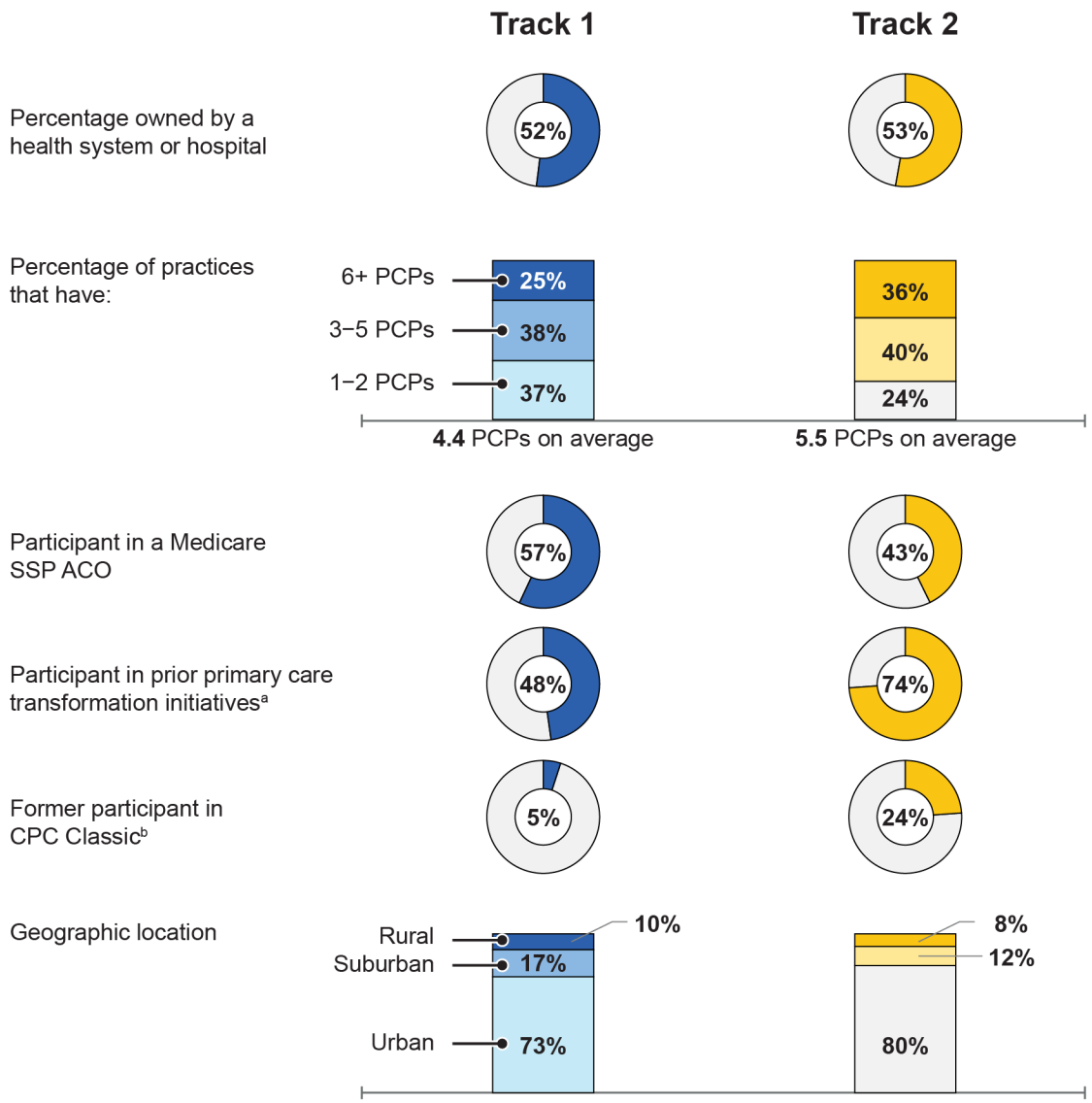
Compared with Track 1 practices, Track 2 practices were:

- Slightly larger on average (5.5 versus 4.4 primary care practitioners),
- Less likely to be in SSP (43 versus 57 percent), and
- More likely to have prior primary care transformation experience (74 versus 48 percent), including more likely to have participated in CPC Classic[4] (24 versus 5 percent) (Figure 2.4).

[4] CPC+ builds on the experience and lessons learned from the CPC initiative (known as "CPC Classic"), a four-year initiative that ran from fall 2012 to the end of 2016. Information about CPC Classic and evaluation reports are available at https://innovation.cms.gov/initiatives/comprehensive-primary-care-initiative/.

Figure 2.4. Characteristics of practices that participated in 2017 regions until end of PY 2

At the end of PY 2, CPC+ practices in both tracks ranged from small to large; were located in rural, urban, and suburban areas; and had varying levels of prior transformation experience.



Source: Mathematica's analysis of (1) CMS' CPC+ practice tracking data for number of PCPs (as of December 31, 2018) and SSP participation status (2018), (2) SK&A data for ownership status (as of November 31, 2017), (3) Area Health Resource File data for geography (rural, suburban, or urban) at baseline (2016), and (4) data from CMS and organizations that offer medical home recognition for participation in prior primary care transformation initiatives including CPC Classic at baseline (2016).

Note: N = 1,246 Track 1 practices and 1,437 Track 2 practices.

[a] We define participation in prior primary care transformation initiatives as participation in CPC Classic or the Multi-payer Advanced Primary Care Practice Demonstration or being a medical home (indicated by National Committee for Quality Assurance, The Joint Commission, Accreditation Association for Ambulatory Health Care, Utilization Review Accreditation Commission, or state medical-home recognition status).

[b] We considered a practice to have participated in CPC Classic if it enrolled in CPC Classic and did not drop out within the first five months of CPC Classic.

ACO = Accountable Care Organization; PCP = primary care practitioner; PY = Program Year; SSP = Medicare Shared Savings Program.

Closer look: How did CPC+ practices differ from other primary care practices when they joined CPC+?

Although the 2,905 practices that began CPC+ in 2017 were diverse, they differed in several ways from all practices providing primary care in the 2017 CPC+ regions. Specifically, when CPC+ began, CPC+ practices in the 2017 regions were more likely on average to:

- **Be owned by a hospital or health system.** Hospitals or health systems owned 55 percent of CPC+ practices, but only 31 percent of all primary care practices in their regions.
- **Be larger.** CPC+ practices had, on average, 4.3 primary care practitioners. The average number of primary care practitioners was 2.8 for all primary care practices in CPC+ regions at the start of CPC+.
- **Have experience with other transformation initiatives.** Sixty-one percent of all CPC+ practices had participated in other primary care initiatives before joining CPC+, compared to only 27 percent of all primary care practices in CPC+ regions. Similarly, 48 percent of all CPC+ practices participated in SSP, compared to only 31 percent of all primary care practices in their regions.
- **Have a practitioner who met meaningful use criteria for health IT use.** Ninety percent of practices in CPC+ had practitioners who met meaningful use criteria, compared with 59 percent of all primary care practices in CPC+ regions.
- **Serve a slightly more advantaged patient population.** The Medicare FFS beneficiaries attributed to CPC+ practices at the start of CPC+ were on average slightly wealthier, more likely to be white, and healthier than beneficiaries served by all primary care practices located in the 2017 regions (data not shown; Anglin et al. 2019).

Notes: This box describes CPC+ practices at the start of CPC+, whereas Figure 2.4 describes practices at the end of PY 2. Given changes in practice participation, percentages and means for a given characteristic may differ slightly. See Figure 2.4 (note a) for definition of participation in primary care transformation initiatives.

2.3. Health IT vendors

CMS requires CPC+ practices to use health IT to support comprehensive primary care. It also requires Track 1 and Track 2 practices to use certified electronic health record (EHR) technology and to report electronic clinical quality measures (eCQMs) to CMS. In addition, CMS requires Track 2 practices to use enhanced health IT functionalities (the tasks practices perform using the software) to advance their work on the five Comprehensive Primary Care Functions. Track 2 practices partner with health IT vendors that committed to providing required functionalities and supporting practices in using them.

Changes in health IT vendor partnership. Track 2 practices that joined CPC+ in 2017 partnered with 66 distinct health IT vendors in PY 1. By the end of PY 2, that number decreased to 52 vendors because of changes Track 2 practices made in their vendor partnerships. Ten percent of practices changed EHR vendors, and most of these switched from a smaller vendor to a larger vendor, which consolidated partnerships among fewer vendors. In addition, the percentage of practices that partnered with vendors that did not provide EHRs (for example,

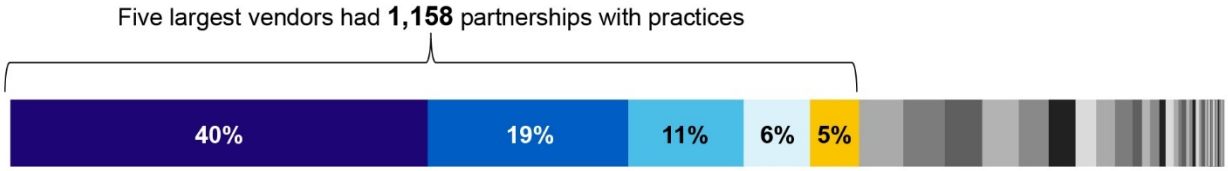
vendors providing only population health software) decreased from 24 percent in PY 1 to 12 percent in PY 2.

Health IT vendor characteristics. Among the 52 vendor partners at the end of PY 2, 56 percent offered a full-feature EHR. Thirty-three percent of vendors provided population health or analytic software for panel management, information exchange, and reporting. The remaining vendors offered narrower types of IT solutions—for example, software that focused on one condition, such as diabetes, or software that tracked patients through care transitions but did not facilitate reporting.

The five largest health IT vendors at the end of PY 2 partnered with a combined total of 1,154 practices, or 81 percent of the Track 2 practices. Because four practices partnered with two of these vendors, the five largest health IT vendors participated in a combined total of 1,158 partnerships with Track 2 practices, or 70 percent of all Track 2 vendor partnerships.[5] These five vendors partnered with 66 to more than 550 Track 2 practices. In contrast, the 33 smallest vendors worked with fewer than 10 Track 2 practices each (Figure 2.5).

Figure 2.5. Percentage of Track 2 practices that partnered with each health IT vendor in PY 2

Track 2 practices had partnerships with one or more health IT vendors. The five largest vendors participated in a combined total of 1,158 partnerships, which reflects 81 percent of Track 2 practices.



Source: Mathematica's analysis of 2018 practice-reported health IT data submitted to CMS.

Note: N = 1,655 vendor partnerships with Track 2 practices. Each rectangle represents one vendor. The width of the rectangle indicates the number of Track 2 practices that partnered with each vendor.

PY = Program Year.

[5] There were 1,431 Track 2 practices, but there were 1,644 vendor partnerships with Track 2 practices because some practices had partnerships with multiple vendors.

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3. PAYER AND HEALTH IT VENDOR SUPPORT: PRACTICES RECEIVED SIGNIFICANT SUPPORT IN PY 2, BUT PERCEIVED NEED FOR ADDITIONAL ASSISTANCE

Key takeaways

CPC+ practices continued to receive significant support through additional multipayer payments, data feedback, learning activities, and health IT support in PY 2.

CMS and all payer partners provided enhanced payments to CPC+ practices that they contract with, in addition to usual payments for services. In PY 2, practices received median enhanced payments of approximately $122,000 per Track 1 practice and $264,000 per Track 2 practice. These payments represented a median of 10 percent of Track 1 practices' total revenue and 15 percent of Track 2 practices' total revenue for PY 2. Median payments for Track 2 practices were higher than for Track 1 practices because CMS and about one-half of payer partners met their commitment to provide Track 2 practices with larger enhanced payments to reflect their more advanced care delivery requirements.

Ninety percent of enhanced payments in PY 2 were paid to practices for participating in CPC+, most commonly in the form of care management fees. The remaining 10 percent were payments to practices for improving their performance on cost, utilization, and/or quality measures.

Two-thirds of the enhanced payments in PY 2 were new funding for CPC+ practices, whereas the remaining one-third of the enhanced payments were available to at least some practices before CPC+ began. CMS provided 94 percent of the new funding for CPC+, and the remaining 6 percent of new funding came from payer partners.

CMS and payer partners also agreed to use an alternative to the historically common FFS payment approach for Track 2 practices by the start of PY 2. Under FFS, practices are paid for each visit or service after they provide it. Under alternative approaches, payer partners provide practices lump sum payments at a regular interval regardless of the number or type of visits they provide, and correspondingly reduce or eliminate FFS payments. Alternative payments are intended to increase practices' flexibility to deliver care in ways that better meet patients' needs and to use practitioner and staff time more efficiently.

However, only CMS and one-fifth of payer partners used an alternative to FFS approach in PY 2; this fell far short of CMS' goal that all payer partners do so.

CMS and most payer partners also provided practices with data feedback and learning support. Payers refined those supports in PY 2 based on PY 1 feedback from practices, making these supports more useful to practices as they continued to implement changes in care delivery.

Practices reported using CPC+ supports to make beneficial changes to care delivery, though some practices also believed that additional support would help them achieve the Comprehensive Primary Care Functions. Specifically, about one-half of practices indicated a need for additional payments and/or stronger health IT vendor support. Practices also noted a need for more timely and user-friendly data feedback. Furthermore, many practices did not try to earn payments for performance because these payments comprised a small proportion of total enhanced payments, and because the practices perceived they had limited control over patients' health care utilization and spending.

3.1. Types of support that CMS, payer partners, and health IT vendors agreed to provide CPC+ practices

CMS and payer partner support. For CPC+, CMS and payer partners agreed to provide:

- *Enhanced payments* (in addition to usual payments for services) to Track 1 and Track 2 practices for (1) participating in CPC+ and (2) improving performance on cost, utilization, and/or quality measures. Payer partners agreed that the financial support for Track 2 practices would be larger than that for Track 1 practices, to reflect the enhanced care delivery functions these practices are required to provide to improve care for patients with complex needs.
- *Alternative to FFS payments* to Track 2 practices. Payer partners agreed to use an alternative to the historically common FFS payment approach. Under FFS, practices are paid for each visit or service they provide. Under alternative approaches, payer partners provide lump sum payments to practices in advance regardless of the number or type of visits they provide. Correspondingly, payer partners reduce or eliminate FFS payments. CMS committed to providing alternative to FFS payments starting in PY 1, and payer partners committed to doing so by the start of PY 2.
- *Data feedback* on utilization of service and/or total cost-of-care measures at least quarterly for practices in both tracks. CMS and its payer partners also agreed to develop a common approach to quality measurement and data feedback, which aimed to streamline practices' review and make data feedback more actionable.

CMS also agreed to provide CPC+ practices with *learning activities* to support their practice transformation work.

CMS and payer partners provide enhanced and alternative to FFS payments and data feedback to practices for individual patients whom they attribute or assign to CPC+ practices.[6] CMS requires CPC+ practices to implement care delivery changes *across all the patients they serve,* not just the patients for whom CMS or a payer partner provides supports. Some patients a practice serves might not be attributed by any CPC+ payer partner if these patients were (1) uninsured, (2) insured by a non-partnering payer, or (3) insured by a partnering payer but not attributed to the practice (for example, if they saw another practice more frequently or more recently).

Health IT vendor support. For CPC+, Track 2 practices formally partner with health IT vendors that committed to (1) provide practices advanced health IT functionalities to meet the Comprehensive Primary Care Functions and (2) support practices in using them. Though only Track 2 practices formalized their vendor relationship for CPC+, practices in both tracks tend to work with health IT vendors through CPC+-sponsored learning supports or through other vendor-initiated forums outside of CPC+.

[6] CMS and most payer partners also provide learning activities. These occur at the practice level, not the patient level.

3.2. CMS and payer partner supports in PY 2

In PY 2, CMS and 92 percent of payers provided support to CPC+ practices. The five payer partners that did not provide any support to CPC+ practices in PY 2 did not have contracts with any CPC+ practices and, therefore, could not provide supports to them. We excluded these payer partners from our analysis of supports provided to practices in PY 2.

CMS provided CPC+ practices with enhanced and alternative payments, data feedback, and learning support. All payer partners that had contracts with CPC+ practices also provided them with enhanced payments. Additionally, most payer partners provided practices with data feedback and many provided them with learning support in PY 2 (Figure 3.1). As a result, CPC+ practices received enhanced payments and data feedback for about one-third of all patients they served. Fewer payer partners provided alternative to FFS payments and, correspondingly, practices received alternative to FFS payments for a smaller proportion of their patients (about 12 percent of all patients CPC+ practices served).

Figure 3.1. Availability of CPC+ supports from CMS and payer partners in PY 2

CMS and all payer partners provided enhanced payments to practices, and most provided data feedback and learning supports. Fewer payer partners provided alternative to FFS payments. Correspondingly, CPC+ practices received enhanced payments and data feedback from CMS and payer partners for around one-third of all patients they served. Practices received alternative to FFS payments for 3 percent of patients in Track 1 practices and 19 percent of patients in Track 2 practices.

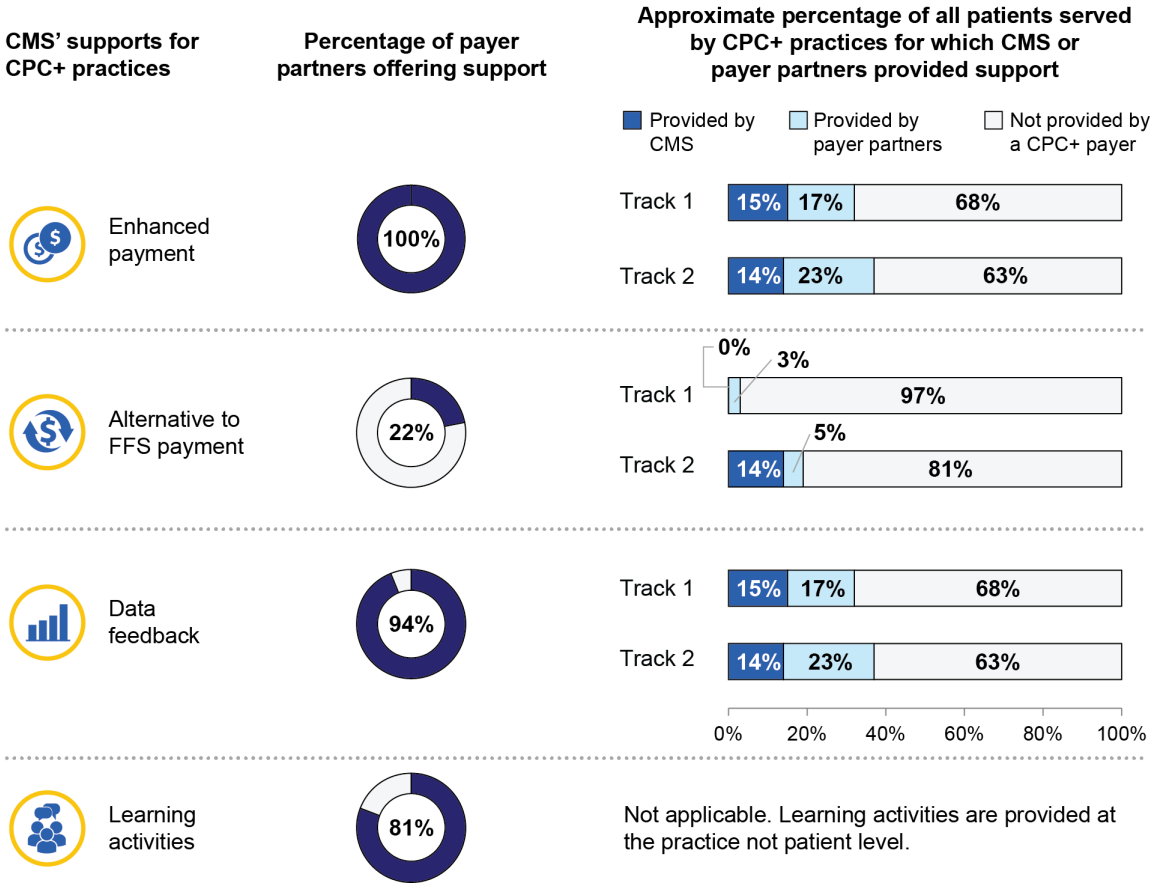


Figure 3.1. ***(continued)***

Source: Mathematica's analysis of data from the independent evaluation's 2018 CPC+ Payer Survey and the 2018 practice-reported financial data submitted to CMS.

Note: N = 54 payer partners. We excluded 10 payers from this analysis. Five did not complete the 2018 CPC+ Payer Survey and another five did not have contracts with any CPC+ practices and, thus, could not provide CPC+ supports.

N = 1,268 Track 1 practices and 1,445 Track 2 practices. Track 1 practices reported serving 6,726,968 patients and Track 2 practices reported serving 9,030,671 patients in PY 2.

FFS = fee-for-service; PY = Program Year.

3.2.1. Enhanced and alternative to FFS payments

A. Enhanced payments

In PY 2, CMS and all payer partners that had contracts with CPC+ practices provided enhanced payments to CPC+ practices. Enhanced payments are paid in addition to usual payments for services to increase practices' resources and flexibility to deliver the Comprehensive Primary Care Functions. CMS and about one-half of payer partners met their commitment to provide higher payments to Track 2 practices to reflect the advanced care delivery requirements expected of them.

Types of enhanced payments. Enhanced payments include payments for participation in CPC+ and payments to reward cost, utilization, and/or quality performance.

CMS and 98 percent of payer partners provided practices payments for participating in CPC+. In PY 1 and PY 2, CMS and most payer partners provided these payments in the form of care management fees (Figure 3.2). Care management fees are paid to practices on a regular interval—most commonly at the beginning of each quarter or month—for each patient a payer partner attributes to a practice. A few payer partners did not use care management fees, and instead enhanced their FFS rates to compensate practices for participating in CPC+.

CMS and most payer partners had the same care management fees in PY 1 and PY 2. In PY 2:

- The average care management payment from *CMS* for Medicare FFS was $15 per beneficiary per month (PBPM) for Track 1 practices and $28 PBPM for Track 2 practices.[7] In addition to care management fees, CMS also paid Track 2 practices a separate, small enhanced payment, referred to as the comprehensiveness supplement, for participating in CPC+. This payment averaged $0.35 PBPM for the first two years of CPC+.[8]

[7] CMS risk adjusted its payments to CPC+ practices for Medicare FFS beneficiaries. CMS assigned each beneficiary to one of four risk tiers (for Track 1 practices) or five tiers (for Track 2 practices), with each tier corresponding to a monthly payment. The tiers reflect beneficiaries' Hierarchical Condition Category scores and, for Track 2 practices, whether patients had a diagnosis of dementia. For Track 1, payments were $6, $8, $16, and $30 for Tiers 1 to 4, respectively. For Track 2, payments were $9, $11, $19, $33, and $100 for Tiers 1 to 5, respectively.

[8] The comprehensiveness supplement is tied to CMS' alternative payment approach. Track 2 practices are paid a portion of their payments for services prospectively via a payment referred to as the Comprehensive Primary Care Payment (CPCP). In addition, practices receive the comprehensiveness supplement, which is equal to 10 percent of the CPCP. As the supplement is in addition to payments for services, we consider it an enhanced payment.

- Median care management fees from *payer partners* varied but were generally lower than those from CMS. For payer partners not differentiating payments by track, median fees ranged from $3 to $6 per member per month (PMPM), depending on line of business. For practices paying higher fees for Track 2 practices, the medians ranged from $3 to $9 for Track 1 practices and from $3 to $16 PMPM for Track 2 practices, depending on the line of business.

In PY 2, CMS and 94 percent of payer partners also started providing practices with payments based on their CPC+ performance in PY 1.[9] Payers used different approaches to reward practice performance:

- *CMS* used two strategies:
  - For practices not participating in SSP, CMS used a prospective bonus payment, reconciled based on practice performance. Specifically, CMS paid practices a lump sum payment at the beginning of a performance year (up to $2.50 PBPM for Track 1 and up to $4.00 PBPM for Track 2)—called the Performance-based Incentive Payment (PBIP). Then, at the end of a performance year, CMS calculated the proportion of that lump sum payment practices earned based on their performance on claims-based measures of inpatient hospitalizations and ED utilization, eCQMs, and patient experience-of-care measures. Practices retained the portion of the PBIP they earned and had to pay back the unearned portion.
  - CPC+ practices participating in SSP are part of an Accountable Care Organization (ACO) that participates in the Medicare Shared Savings Program. Primary care practices, specialists, and/or hospitals come together to form an ACO. For SSP, CMS estimates how much an ACO "saved" (that is, the extent to which they reduced spending relative to a benchmark). If savings are realized, CMS pays out a portion of those savings to the SSP ACO. If losses are incurred, ACOs that have agreed to accept downside risk have to pay back a portion of those loses to CMS. It is up to the SSP ACO to decide whether to share any of these savings (or losses) with its various providers and, if so, how much.
- *Payer partners* most commonly used retrospective bonus payments (67 percent) and/or shared savings opportunities (61 percent; Figure 3.2). The metrics payer partners used to calculate performance scores remained consistent from PY 1 to PY 2, with payer partners continuing to rely most often on claims-based cost, utilization, and quality measures.

[9] Most payers' payments for performance that were paid in PY 2 were based on practices' PY 1 performance; however, a few payers use rolling averages to assess practice performance and may have tied PY 2 payments partly to PY 2 performance.

Figure 3.2. Enhanced payment approaches CPC+ payer partners used in PY 2

Type of payment support	Used by CMS for Medicare FFS?	Percentage of other payer partners using approach [a]
Any enhanced payment in addition to usual payments for services	✓	**100**
Any payments for participation	✓	**98**
Care management fees	✓[b]	96
Enhanced FFS payments, adjusted based on practice participation in CPC+ or another program[c]		4
Any payments for performance that reward cost, utilization, and/or quality performance	✓	**94**
Prospective PBIP, reconciled based on practice performance	✓ for non-SSP practices[d]	7
Retrospective bonus payments based on practice performance		67
Bonus payment based on practice performance, retrospective/prospective unknown		4
Retrospective shared savings program	✓ for SSP practices[d]	61
Enhanced FFS payments, adjusted based on practice performance[c]		6

Sources: Mathematica's analysis of data from the independent evaluation's 2018 CPC+ Payer Survey and payer interviews.

N = 54. We excluded 10 payer partners from this analysis. Five did not complete the 2018 CPC+ Payer Survey and another five did not have contracts with any CPC+ practices and, thus, could not provide CPC+ supports.

[a] Individual percentages may not sum to totals due to rounding and because subtypes of payments are not mutually exclusive.

[b] Track 2 practices also received a small additional enhanced payment, referred to as the comprehensiveness supplement, for participating in CPC+. This payment averaged $0.35 for the first two years of CPC+.

[c] Four payer partners made enhanced FFS payments in PY 2. One payer partner provided a base enhanced FFS payment based on participation, plus an additional enhanced FFS payment based on practice performance; we classified this payer partner as providing both enhanced FFS for participation and enhanced FFS adjusted based on performance. Another payer partner adjusted its enhanced FFS schedule based on practice tiers; we classified this payer partner as providing only enhanced FFS payment based on participation. We classified the two payer partners that adjusted their entire enhanced FFS schedule based on practice performance as providing only enhanced FFS payment adjusted based on performance.

[d] Medicare FFS is using a prospective PBIP for CPC+. However, this payment is available only to practices that do not participate in the Medicare SSP. Practices participating in both CPC+ and SSP participate in a retrospective shared savings program as a member of an SSP Accountable Care Organization.

FFS = fee-for-service; PBIP = Performance-based Incentive Payment; PY = Program Year; SSP = Medicare Shared Savings Program.

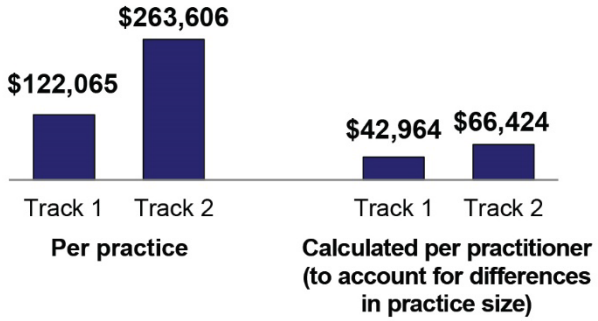
Level of enhanced payments. CPC+ practices continued to receive substantial enhanced payments in PY 2 from CMS and other payer partners. In PY 2, practices received median enhanced payments of approximately $122,000 per Track 1 practice and $264,000 per Track 2 practice (Figure 3.3). This represented a median of 10 percent of practice revenue for Track 1 practices and 15 percent for Track 2 practices. To account for differences in practice size, we also examined the payments to practices another way—dividing by the practice's number of primary care practitioners. In PY 2, median enhanced payments per primary care practitioner, were around $43,000 for Track 1 practices and $66,000 for Track 2 practices.

Most of the enhanced payments for CPC+ were for participation. Specifically, for a typical practice in PY 2, 90 percent of CPC+ enhanced payments were payments for participation in CPC+, whereas only 10 percent were to reward practices for their performance on cost, utilization, and/or quality metrics (Figure 3.4). This distribution was similar for both tracks.

CMS' share of total enhanced payments was much higher than its share of patients in CPC+. Although Medicare FFS beneficiaries accounted for only 37 percent of attributed CPC+ patients, payments from CMS for those beneficiaries in PY 2 constituted 68 percent of the total enhanced payments from CMS and payer partners (Figure 3.5).

Figure 3.3. Median enhanced payments from CMS and payer partners in PY 2

CPC+ practices received substantial payments from CMS and other payers in PY 2.



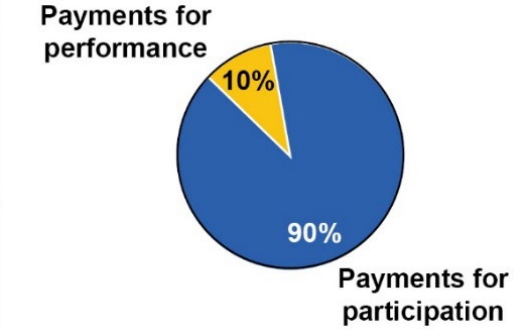
Sources: Mathematica's analysis of 2018 practice-reported financial data submitted to CMS and 2018 payment data provided by CMS.

Notes: N= 2,715 CPC+ practices.

PY = Program Year.

Figure 3.4. Median proportion of PY 2 enhanced payments for performance and participation

Payments for participation made up most of CPC+ enhanced payments.

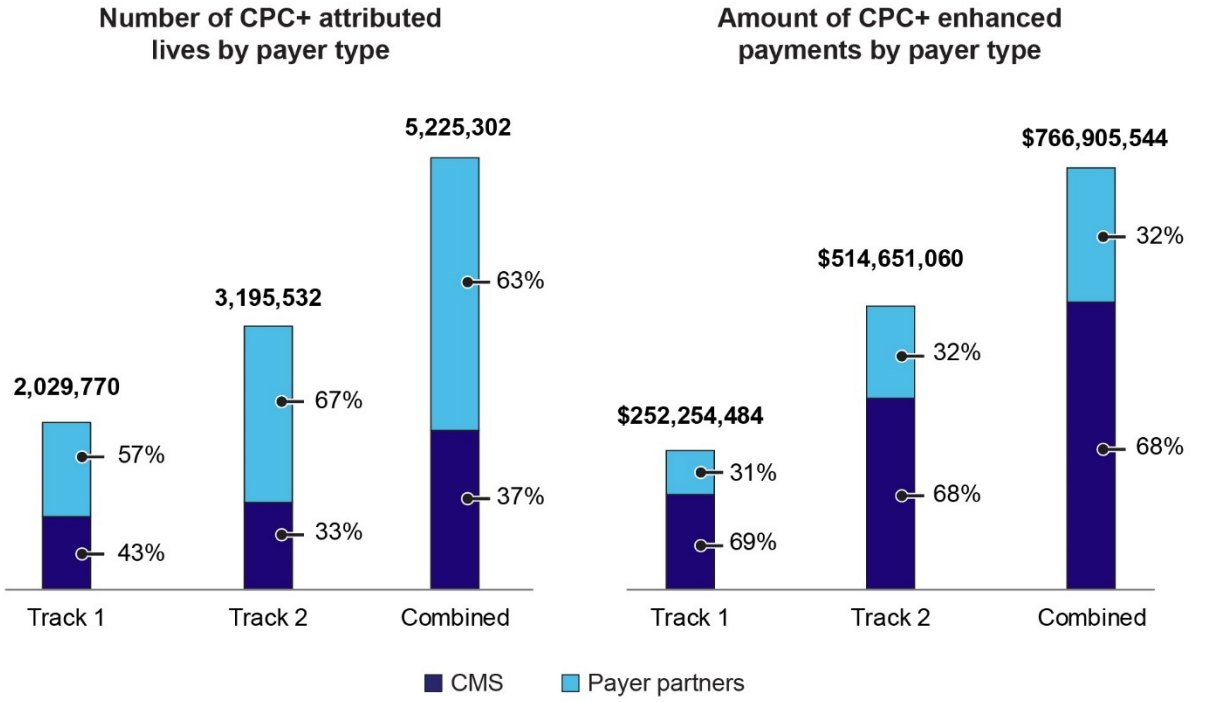


Sources: Mathematica's analysis of data from the independent evaluation's 2018 CPC+ Payer Survey, 2018 practice-reported financial data submitted to CMS, and 2018 payment data provided by CMS.

Notes: N= 2,715 CPC+ practices.

Figure 3.5. Relative contribution of CMS and payer partners to CPC+ enhanced payments in PY 2

Medicare FFS accounted for 37 percent of CPC+ attributed lives but 68 percent of CPC+ enhanced payments.



Sources: Mathematica's analysis of 2018 practice-reported financial data submitted to CMS and 2018 Medicare FFS beneficiary attribution lists payment data provided by CMS.

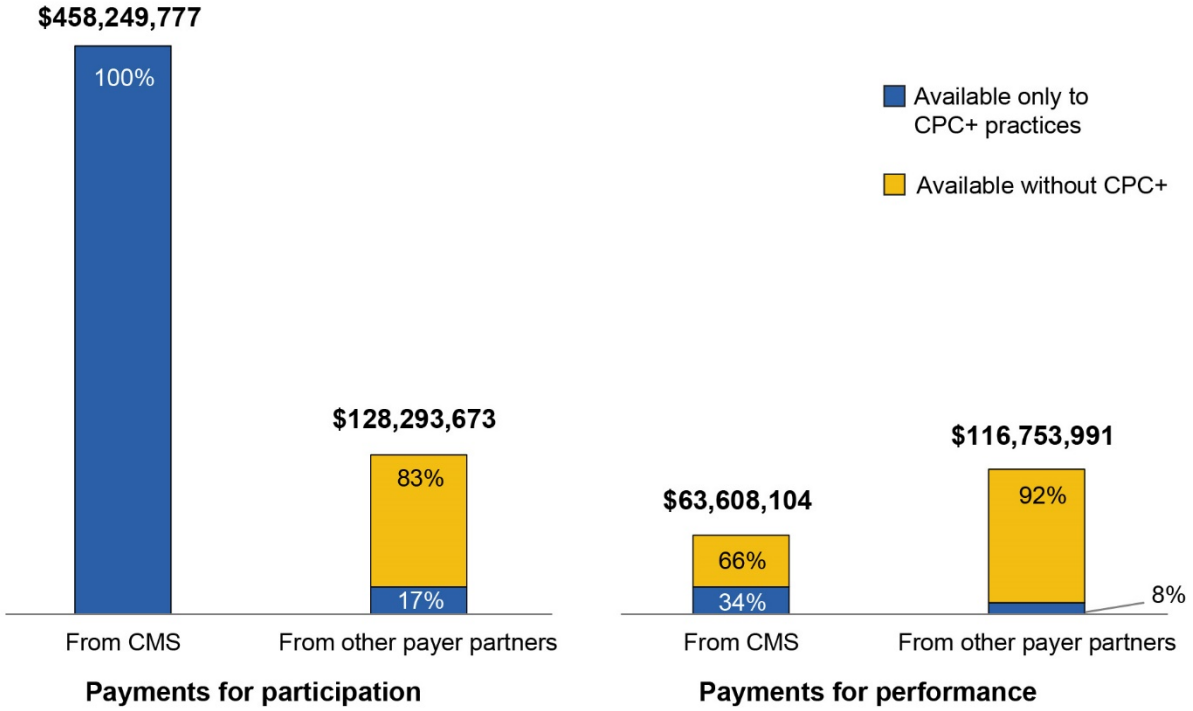
Notes: N= 2,715 CPC+ practices.

FFS = fee for service; PY = Program Year.

Two-thirds of the enhanced payments were new funding provided for CPC+, whereas the remaining one-third of the enhanced payments were available to at least some practices before CPC+ began. CMS provided 94 percent of the new funding for CPC+. Specifically, all of CMS' payments to practices for participating in CPC+ and one-third of CMS' payments for performance were new for CPC+ (Figure 3.6). In contrast, most of the other payer partners' enhanced payments were available to practices participating in payers' other transformation programs; only 17 percent of their payments for participation and 8 percent of their payments for performance were new for CPC+.

Figure 3.6. Total enhanced payments from CMS and payer partners and the proportion of enhanced payments that were unique for CPC+ in PY 2

CMS' care management fees were available only to practices participating in CPC+. In contrast, about two-thirds of CMS' payments for performance and most of other payer partners' enhanced payments (for participation and performance) were available to practices participating in payers' other transformation programs.



Sources: Mathematica's analysis of data from the independent evaluation's 2018 CPC+ Payer Survey, 2018 practice-reported financial data submitted to CMS, and 2018 payment data provided by CMS.

Notes: N= 2,715 CPC+ practices.

FFS = fee for service; PY = Program Year.

Practices' perspectives. Many deep-dive practices indicated they were using enhanced payments—particularly care management fees—to improve care delivery. For example, many deep-dive practices used these payments to hire staff (most commonly, care managers or care coordinators) and to expand services (such as adding evening and weekend hours, refining risk-stratification models, or developing team-based care). Deep-dive practices credited the stable, predictable structure of care management fees with making these investments possible.

"The CPC+ funds help build our care teams across the primary care clinics. They help fund the care managers, the behavioral health consultants, and the pharmacists, and so we're very thankful that the care management fees are available."

—CPC+ director of operations at a large, system-owned Track 2 practice, spring 2019

Methods: Characterizing interview data

When reporting on findings from qualitative interviews with deep-dive practices, payer partners, and health IT vendors, we use the word "couple" to denote 2 respondents, "few" to denote 3 to 4 respondents, "several" to denote 5 to 10 respondents, "many" to denote more than 10 respondents but fewer than three-fourths of relevant respondents, and "most" to indicate more than three-fourths of respondents. We have interview data for most topics from 21 to 24 deep-dive practices, 66 payer partners, and 13 health IT vendors.

Practices expressed concerns about the adequacy of CPC+ payments. Only 41 percent of Track 1 practices and 51 percent of Track 2 practices indicated on the 2018 Practice Survey that CPC+ funding from Medicare FFS was adequate or more than adequate for them to complete the work CPC+ required. A smaller percentage of practices (about one-third in each track) reported payments from payer partners were adequate.

In general, only a few deep-dive practices took steps to try to earn CMS' PBIPs, though more practices did so in PY 2 than in PY 1. Several deep-dive practices noted that investing more resources in trying to earn PBIPs was not worthwhile, given the relatively modest size of these CMS payments for performance, compared to the care management fees they receive for participating in CPC+. In addition, practices felt they alone could not control patients' utilization and spending when most hospitals, specialists, and other providers still operate in a primarily FFS environment that incentivizes them to provide a higher volume of services.

Among practices that did take steps to earn payments for performance, more practices tried to improve the quality component than the utilization component. Most practices that attempted to improve their performance on *quality* measures focused on delivering preventive services and documenting those services more fully in the EHR to help the practice receive credit on the relevant eCQMs. Among practices that took concrete actions to improve their performance on *utilization* measures, most focused on trying to reduce ED use (rather than hospitalizations), by having care managers follow up with patients who had recently visited the ED, to better understand whether and how these visits might have been prevented. Some of these practices also ramped up efforts to educate patients about alternatives to the ED (such as an after-hours clinic or a nurse advice line).

B. Alternative to FFS payments

CMS and its payer partners agreed to provide Track 2 practices with alternative to FFS payments to increase practices' flexibility to deliver services or types of visits (such as home visits or group visits) that might benefit their patients, but they cannot bill for under many traditional FFS payment arrangements.

- *CMS* uses an alternative to FFS approach to pay Track 2 practices for selected evaluation and management (E&M) services. For a Track 2 practice, CMS calculates the average cost for those E&M services in a historical period. Then, it pays that practice a proportion of that amount prospectively at the beginning of each quarter—this payment is referred to as the Comprehensive Primary Care Payment (CPCP). In PY 2, Track 2 practices could elect to have 25, 40, or 65 percent of their payments for selected E&M services paid prospectively via the CPCP, a shift from PY 1 when practices also had the option of choosing 10 percent. CMS then correspondingly reduces FFS payments for those E&M services by that chosen proportion. CMS designed the CPCP plus the reduced FFS payments (referred to as the "hybrid payment") with the goal of being revenue neutral for the practice.
- Twenty-two percent of *payer partners* used an alternative to FFS payment approach in PY 2, up slightly from 16 percent that used an alternative to FFS approach in PY 1. (All payer partners that offered an approach in PY 1 indicated that those approaches pre-dated CPC+.) In contrast to CMS, most of the payer partners using an alternative to FFS payment approach in PY 2 did so for practices in *both* tracks.

"We were already heading towards changing reimbursement for primary care, but [partnering in CPC+] put us on a faster progression down that road."

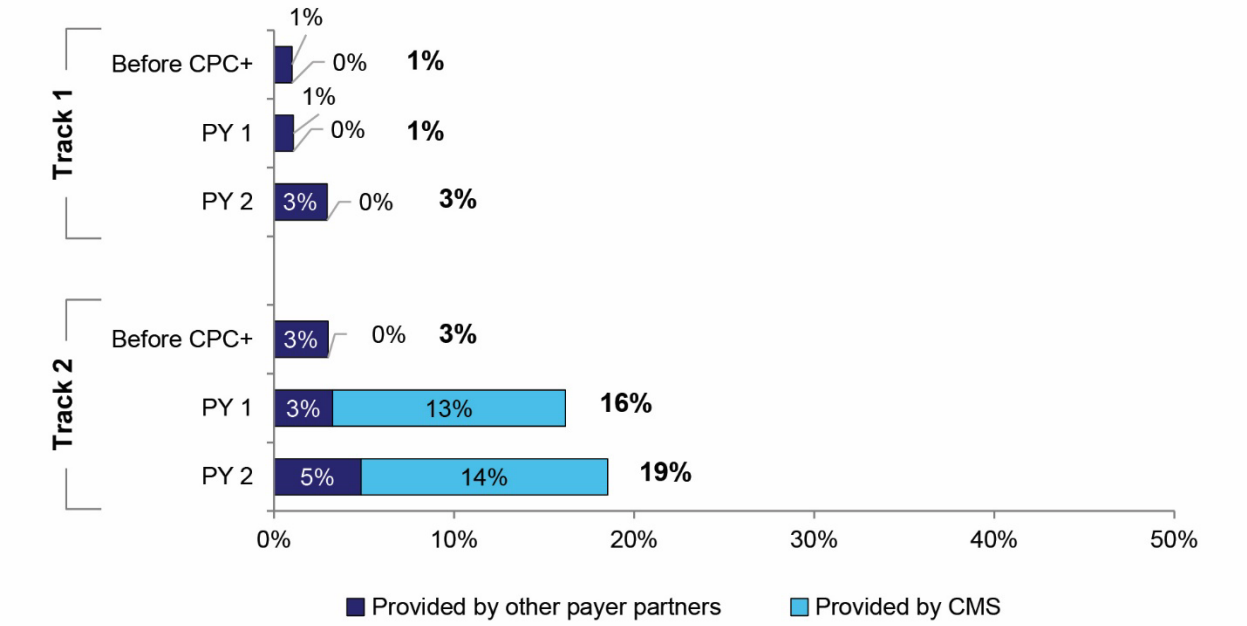
—Large payer partnering in one CPC+ region, fall 2018

The proportion of CPC+ practices' patients who were covered by an alternative to FFS payment arrangement increased *slightly* from PY 1 to PY 2. Specifically, for Track 1, the percentage covered by an alternative arrangement rose from 1 to 3 percent in PY 2. For Track 2, the percentage increased from 3 percent before CPC+ to 16 percent in PY 1 as CMS started to provide alternative payments to Track 2 practices; it increased again to 19 percent in PY 2 as a few payer partners added new alternative payments (Figure 3.7).

Although there has been a small increase in the use of alternative payments, this still falls well short of CMS' goal for all CPC+ payer partners to have implemented an alternative to FFS approach for Track 2 practices by the start of PY 2. In PYs 1 and 2, payer partners that implemented or considered implementing alternative to FFS payment approaches cited similar barriers: practices' reluctance and/or lack of readiness to accept alternative to FFS payments, and the cost and complexity of payer partners switching claims processing systems to accommodate alternative to FFS payments. Several payer partners reported they did not intend to implement any alternative to FFS payment approach, because their organizations were choosing a path to value-based payment that differed from CMS' CPC+ payment approach(es) (for example, by adjusting all payments offered based on practice performance).

Figure 3.7. Approximate percentage of all patients served by CPC+ practices for which CMS or payer partners provided alternative to FFS payments in PY 2

The percentage of Track 2 practices' patients covered by an alternative to FFS arrangement increased at the start of CPC+ as CMS started to use alternative payments for Medicare FFS beneficiaries in those practices. From PY 1 to PY 2, the proportion of CPC+ practices' patients covered by an alternative to FFS payment arrangement increased *slightly* in both tracks as a few payer partners added new alternative payment approaches.



Source: Mathematica's analysis of data from the independent evaluation's 2018 CPC+ Payer Survey and the 2018 practice-reported financial data submitted to CMS.

Note: N = 54 payer partners. We excluded 10 payer partners from this analysis. Five did not complete the 2018 CPC+ Payer Survey and another five did not have contracts with any CPC+ practices and, thus, could not provide CPC+ supports.

N = 1,268 Track 1 practices and 1,445 Track 2 practices. Track 1 practices reported serving 6,726,968 patients and Track 2 practices reported serving 9,030,671 practices in PY 2.

FFS = fee-for-service.

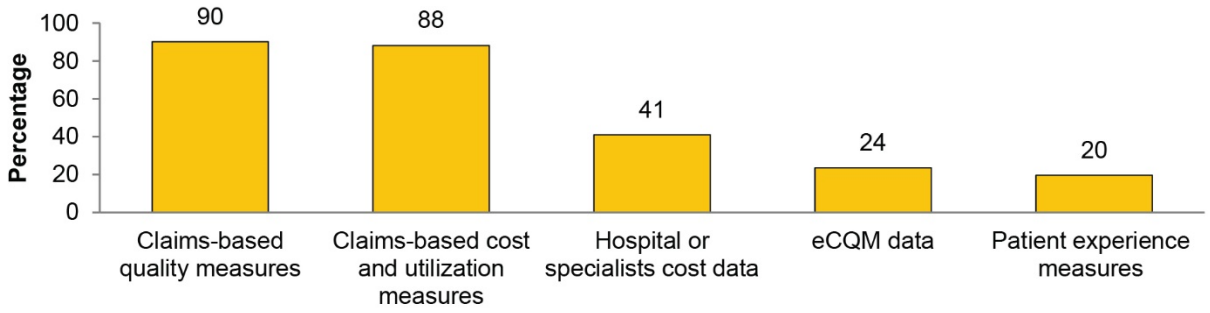
Practices' perspectives. Many deep-dive practices are approaching alternative to FFS payments with hesitancy. As in PY 1, many deep-dive Track 2 practices remained concerned about moving further away from FFS payments and toward prospective payments. In their view, this change increased their financial exposure, even though CMS designed the hybrid payments (CPCPs combined with lower FFS payments) to be revenue neutral. Reflecting this hesitation, 71 percent of practices elected the minimum CPCP percentage in PY 1 (10 percent CPCP) and 64 percent of practices elected the minimum CPCP percentage possible in PY 2 (25 percent CPCP). There was also only modest progress on implementing alternatives to traditional office visits, with only a few more deep-dive practices implementing alternatives to traditional office visits in PY 2 than in PY 1 (Section 4.3.1 provides more information on practices' work on alternative visits).

3.2.2. Data feedback

As in PY 1, in PY 2, CMS and most payer partners with contracts with practices (94 percent) provided data feedback to CPC+ practices to support continuous quality improvement. Most payer partners offering data feedback included claims-based quality measures (90 percent) and claims-based cost or utilization measures (88 percent) as part of their reports or tools (Figure 3.8).

Figure 3.8. Among payer partners providing data feedback, percentage that included types of data in their feedback in PY 2

Payer partners most commonly included claims-based quality and cost and utilization measures in their feedback.



Source: Mathematica's analysis of data from the independent evaluation's 2018 CPC+ Payer Survey.

N = 54. We excluded 10 payer partners from this analysis. Five did not complete the 2018 CPC+ Payer Survey and another five did not have contracts with any CPC+ practices and, thus, could not provide CPC+ supports.

eCQM = electronic clinical quality measure; PY = Program Year.

CMS and payer partners made two main types of improvements to their data feedback from PY 1 to PY 2:

- **Further aggregation of data across payer partners.** The goal of aggregating claims data feedback is to improve practices' view of their entire patient population and reduce the burden on practices to access, review, and reconcile multiple reports or tools. To aggregate data across payers in a given region, payer partners submit their claims data to a third-party vendor that produces a single report or tool that analyzes and presents the data. Three regions—Colorado, Ohio/Kentucky, and Oklahoma—began aggregation during CPC Classic, prior to CPC+, and continued these efforts into PY 1 and PY 2. In PY 2, Ohio/Kentucky added data from five Medicaid managed care plans to their aggregated feedback, which included data from Medicare FFS and commercial payers only in PY 1. Additionally, payer partners in two regions—Greater Philadelphia and Oregon—started aggregating data, including Medicare FFS data, in PY2.

Two other regions—Arkansas and Michigan—actively pursued data aggregation in PY 2 and may provide aggregated feedback in future years.[10] For example, Michigan developed a tool and received data from one payer partner but had not yet shared its dashboard with practices.

The remaining six regions that began CPC+ in 2017 had not made significant progress with data aggregation in PY 2 or were not actively pursuing data aggregation.

- **Improvement in data feedback usability.** CMS and payer partners took additional steps to improve the usability of their data feedback in PY 2, moving from static reporting formats (such as PDFs or static Excel files) to more interactive formats (such as online portals). In PY 2, CMS switched from providing CPC+ practices with data feedback via an interactive Excel file to introducing a business intelligence tool that includes detailed data and enhanced filtering capabilities.

  Similarly, a few payer partners in 2017 regions began supplementing their static reports with data portals or interactive reports or moved away from static reports altogether in PY 2. Moreover, all six regions that provided aggregated data feedback to practices as of PY 2 did so using an interactive format. Moreover, data aggregators in a couple of regions worked to further improve the usability and interactivity of their tools in PY 2. Payer partners in one region changed the layout of their feedback tool so practices can more easily drill down into patient-level claims to better understand how their patients are receiving care—for example, by type of service, such as cardiology.

Closer look: Data aggregation challenges in PY 2

Among regions providing aggregated data, payer partners reported similar challenges to data aggregation in PY 1 and PY 2.

- Most payers—including CMS—provide aggregated feedback *in addition* to their individual, unaggregated reports or tools. Thus, data aggregation has not reduced the number of reports or tools practices receive.
- Many payer partners report that aggregating data takes significant time and resources.
- A couple of payer partners reported it is time-intensive to educate practitioners and practice staff to use aggregated data effectively.

"We love the [new CMS business intelligence] tool. The providers love it, because they like to see how they're doing compared to their cohorts. We also love that it can be drilled down to the patient level. It's been really helpful and a huge asset."

—Practice transformation supervisor for health system of a small Track 1 practice, spring 2019

[10] Payer partners in Arkansas and Tennessee continued to provide *aligned* individual feedback for PY 2—that is, each payer distributes this feedback individually, but the measures in the feedback, measure specifications, and feedback structure align with those of other payers.

Practices' perspectives. More practices were aware that data feedback was available from payer partners in PY 2 than in PY 1. For the last quarter of PY 2, 97 percent of practices reported to CMS that they knew Medicare FFS feedback was available, an increase from 89 percent in PY 1.[11] A slightly smaller proportion of practices (87 percent) reported that data feedback from payer partners was available. In addition, 44 percent of practices reported data feedback from multiple sources was available, an increase from 37 percent in PY 1. The practices reporting that data feedback from payer partners was not available may include a mix of practices that lack access and those unaware that they have access to such feedback.

Almost all practices that reviewed data feedback used it to improve care, with half of these practices reporting in the 2018 CPC+ Practice Survey that they made *major changes* as a result. Practices were most likely to report making major changes based on quality-of-care data, followed by service utilization data. As in PY 1, many deep-dive practices reported that they used data feedback from CMS and payer partners to prioritize areas for quality improvement and also to identify patients who could benefit from additional services or supports.

However, practices continued to raise concerns about the usefulness of the data feedback. Most notably, CMS and payer partners may not provide data feedback until three to six months after the date of service, which presents challenges for population health management and timely quality improvement. Practices also indicated that they need help understanding and using the data feedback they receive. Deep-dive practices in regions where data feedback was not aligned or was newly aggregated also raised concerns about the volume of data feedback from payer partners.

3.2.3. Learning activities

CMS sponsors learning activities that are specific to CPC+ to provide practices with detailed information and resources on achieving the Comprehensive Primary Care Functions and to promote peer learning among CPC+ practices. As in PY 1, CMS and its learning contractors provided a range of learning activities in PY 2 (Table 3.1). These included an implementation guide, a web-based collaboration platform, group learning activities, and tailored individual and small group technical assistance (also called "practice coaching").

Table 3.1. Summary of CPC+ learning activities provided by CMS in PY 2

Information dissemination	Group learning activities	Tailored support
CPC+ Connect: Web-based collaboration platform moderated by CMS learning contractors; used by practices to get guidance and share ideas and resources	***Regional learning sessions:*** Full-day, in-person meetings hosted in each region twice a year	***Practice coaching:*** Phone-based, virtual, or in-person interactions for practices identified as needing additional assistance
CPC+ Implementation Guide: Reference document detailing care delivery and reporting requirements and helpful references	***Regional Implementation Networking Groups (RINGs):*** Virtual regional groups for practice leads and care managers	
Help desk: A centralized help desk that CPC+ practices contact with questions	***Health IT affinity groups:*** Groups that bring practices together with their health IT vendor and/or other practices that use the same vendor to discuss solutions to using health IT to support CPC+ implementation	
	Other group learning activities (national webinars, Practice in Action meetings, office hours): Virtual meetings for practices hosted by CMS learning contractors	

[11] CMS asked practices to report on data availability and its use as part of their quarterly reporting on meeting care delivery requirements.

Although they are not leading CPC+-specific learning activities, around 80 percent of payer partners with contracts with practices provided learning support to CPC+ practices through their other primary care transformation programs in PYs 1 and 2. On the 2018 CPC+ Practice Survey, about half of CPC+ practices reported they received learning support from payer partners in the first half of PY 2. The specific types of support practices reported receiving from payer partners included explanations of CPC+ payment methodologies (51 percent of practices), training on how to use payers' data feedback (53 percent), and coaching on how to improve practice processes and workflows (48 percent).

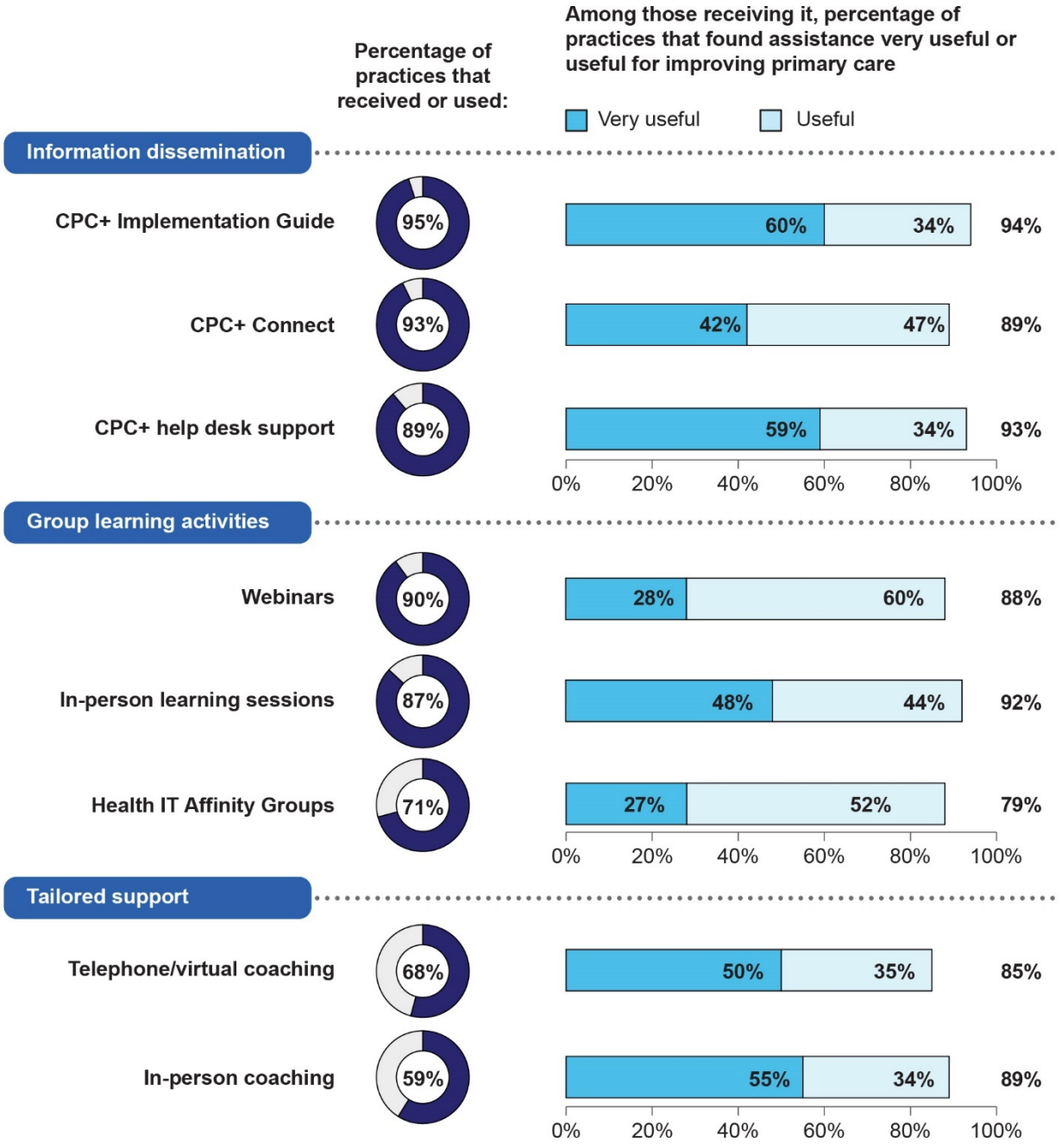
In PY 2, CMS refined the learning activities provided through its contractors in response to stakeholder feedback from PY 1 and to make the supports more useful to practices. For example, CMS made modifications to the Implementation Guide (such as adding frequently asked questions about care delivery requirements and callout boxes that describe actions critical to transforming care delivery). Practice facilitators (or "coaches") also provided support to help practices navigate the revised guide. In response to concerns raised by practice facilitators, CMS began incorporating input from practice facilitators into the process for prioritizing practices for coaching. In PY 1, CMS and the learning contractors solely used data (such as information practices reported to CMS on their progress toward the Comprehensive Primary Care Functions) to identify which practices would receive coaching. Starting in PY 2, practice facilitators could use their knowledge of the practices (for example, if a practice recently lost a care manager or changed EHRs) to help refine the list of priority practices to receive coaching.

In PY 2, CMS also replaced virtual learning sessions with the first role-specific group learning activities. Specifically, CMS created two types of Regional Implementation Networking Groups (RINGs)—one for practice leads and one for care managers—so that staff could learn from others with similar CPC+ responsibilities. Practice facilitators conducted RINGs regionally.

Practices' perspectives. A large proportion of CPC+ practices participated in or used each of CMS' learning supports in PY 2 and found them useful for improving primary care (Figure 3.9). Practices found tailored one-on-one or small group support, the Implementation Guide, and the CPC+ help desk to be the most useful supports in PY 2. Although practices found group learning activities somewhat less useful than these supports, practice facilitators reported that the new RINGS for care managers were well received. Practices' suggestions for making learning activities even more useful in future program years included improving the usability of the web-based collaboration platform, making more learning activities available for groups of practices with similar characteristics or the same health IT vendors, and providing more in-person one-on-one coaching.

Figure 3.9. Practices' use and perceptions of CMS' CPC+ learning activities in the first half of PY 2

Practices were highly engaged with each of CMS' learning activities in PY 2 and generally found them useful. Among those engaged in an activity, practices found the CPC+ Implementation Guide, CPC+ help desk, and tailored one-on-one support were most useful for improving primary care.



Source: Mathematica's analysis of data from the independent evaluation's 2018 CPC+ Practice Survey.

Note: N = 2,765 CPC+ practices. The survey asked practices about their use of CPC+ learning activities in the prior six months (approximately the first half of PY 2). Practices' self-report of their use of learning activities may differ from actual use.

3.3. Health IT vendor support in PY 2

Health IT vendor partners committed to helping Track 2 practices implement the advanced health IT functionalities that CMS requires Track 2 practices to use to support the Comprehensive Primary Care Functions (see Closer Look text box).

In PY 1,[12] many vendors indicated that features available in their products before CPC+ could support some of practices' work on the Comprehensive Primary Care Functions; however, many vendors needed to further improve their functionalities to meet the CPC+ advanced health IT requirements. Many vendors reported they planned to do so in future years and indicated it would take more time to develop advancements and ensure practices understood how to use them.

In addition to their work on the functionalities, about half of health IT vendors interviewed in PY 1 reported they collaborated with both Track 1 and Track 2 practices during CMS-sponsored CPC+ learning activities.

Practices' perspectives. Most deep-dive practices reported using health IT to support changes in care delivery; however, only a few Track 2 practices indicated they changed their use of health IT specifically in response to CMS' advanced health IT requirements for CPC+. In addition, several deep-dive practices reported challenges using their health IT to improve quality of care and for reporting, including tracking eCQMs (the one required health IT functionality for PY 2).

> **"Getting information into the [electronic health] record in a way that it's retrievable for population health as well as useful for the physician seeing an individual patient are sometimes mutually exclusive."**
>
> ***— Chief Medical Officer at the system of a large Track 1 practice, spring 2019***

About one-half of CPC+ practices reported on the 2018 CPC+ Practice Survey that health IT vendor support was somewhat or very useful for improving primary care. This is lower than the ratings for other CPC+ supports. As in PY 1, deep-dive practices were most satisfied working with proactive vendors that were responsive to their questions.

[12] In PY 1, we interviewed 13 health IT vendors. These vendors worked with 83 percent of Track 2 practices in PY 1 (Peikes et al. 2019a; Anglin et al. 2019). We did not interview health IT vendors in 2018, so we do not have updated findings in this report for PY 2. We will provide an update on the PY 3 vendor experience in our third annual report.

Closer look: Track 2 advanced health IT requirements

In PY 2, CMS refined the health IT functionalities that Track 2 practices are required to use. CMS made these changes to (1) provide practices with more flexibility in how they use health IT, (2) relax requirements and implementation timelines to account for the current state of technology and its use, and (3) reduce burden on practices.

The refined list of advanced health IT requirements for Track 2 practices includes functionalities related to three of the five Comprehensive Primary Care Functions:

Planned care and population health. By midway through PY 2, Track 2 practices were required to use an electronic dashboard to track and analyze their performance on eCQMs at least quarterly to support population health management.

Care management. By the start of PY 3, Track 2 practices were required to:

- Generate patient risk scores using a health-IT-enabled algorithm to identify patients who could benefit from care management.
- Flag patients who could benefit from care management in their EHR or generate lists of patients with complex needs to ensure patients receive needed care management.
- Use care plan templates within their health IT system that include, at minimum, patients' concerns, goals, self-management plans, and action plans.

Comprehensiveness and coordination. By the start of PY 3, Track 2 practices were required to:

- Use an electronic screening tool to assess patients' health-related social needs.
- Store an inventory of resources to meet patients' identified health-related social needs.

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4. CPC+ PRACTICE CHANGE: PRACTICES MADE MEANINGFUL CHANGES TO CARE DELIVERY IN PY 2, THOUGH THEY HAD MORE WORK TO DO

Key takeaways

In the first two years, practices actively embraced the hard work of CPC+ implementation and believed CPC+ improved the quality of care they provide. While there is still considerable work to do during the remaining three years of CPC+, as compared to PY 1, more practices reported that they:

- Had care management staff and processes in place to help patients with complex medical needs manage their conditions.
- Screened patients for unmet behavioral health and social service needs and started adding staff and establishing processes to help address those needs.
- Improved coordination with hospitals, EDs, and specialists that see their patients.
- Followed up in a timely manner with their patients after they were seen by a hospital or ED.
- Had dedicated QI staff who used evidence-based QI strategies.

However, in PY 2, practices continued to face challenges making changes to care delivery and reaching all patients who would benefit from new services. Areas where practices have the most room for improvement include:

- Providing longitudinal care management services to a larger proportion of their patients at higher risk, using an advanced risk-stratification strategy to identify those patients, and using care plans more fully to guide those services.
- Integrating behavioral health services more deeply, including developing workflows and processes and identifying and training staff.
- Helping patients set and "self-manage" or meet their own health goals.
- Offering alternatives to traditional office visits (such as group visits or home visits) to more patients.
- Improving coordination with social service agencies.

4.1. Comprehensive Primary Care Functions and related care delivery requirements

CMS requires practices participating in CPC+ to make many complex, interrelated changes in how they deliver care to their patients. The requirements ask practices to focus on five Comprehensive Primary Care Functions: (1) access and continuity, (2) care management, (3) comprehensiveness and coordination, (4) patient and caregiver engagement, and (5) planned care and population health. The five functions together form the basis of changes in the delivery of primary care services, which CMS hypothesizes will improve patient health outcomes and reduce costs (see Chapter 1).

To improve care delivery, CMS specifies a series of progressively more challenging care delivery requirements in each of the five functions at the start of each CPC+ program year. These requirements are slightly more advanced for Track 2 practices. Table 4.1 shows the care delivery requirements for PY 2, noting if requirements were new for PY 2 or if they were enhanced to build on those in place in PY 1. CMS encourages practices to view the requirements as starting points for the work they do to improve care delivery. Practices have autonomy to decide how they will approach their care improvement work, including how to implement the care delivery requirements, which broader changes within each function to prioritize, which staff to involve, and how to monitor change.

Table 4.1. Care delivery requirements for 2017 Starters in PY 2

Track 1[a]	Track 2	Changes to requirements from PY 1 to PY 2
1. Access and continuity		
1.a. Maintain at least 95 percent empanelment to practitioners (including physicians, nurse practitioners, physician assistants, and clinical nurse specialists) and/or care teams. 1.b. Ensure patients have 24/7 access to a care team practitioner with real-time access to the EHR. 1.c. **ENHANCED for both tracks:** Measure continuity of care for empaneled patients by practitioners and/or care teams in the practice.	Complete all Track 1 requirements and: 1.d. Regularly deliver care in at least one way that is an alternative to traditional office visit-based care, meets the needs of your patient population, and increases access to the care team/practitioner, such as eVisits, phone visits, group visits, home visits, and/or alternate location visits (for example, senior centers and assisted living facilities).	1.c. In PY 1, CMS required practices in **Track 1 and Track 2** to organize care by practice-identified teams to optimize continuity. Starting in PY 2, CMS required practices to *measure* continuity of care.

Table 4.1. ***(continued)***

Track 1[a]	Track 2	Changes to requirements from PY 1 to PY 2
2. Care management		
2.a. **ENHANCED for both tracks:** Use a two-step risk stratification process for all empaneled patients, addressing medical needs, behavioral diagnoses, and health-related social needs: Step 1. Use an algorithm based on defined diagnoses, claims, or other electronic data enabling population-level stratification; and Step 2. Add the care team's perception of risk to adjust the risk stratification of patients, as needed. 2.b. Based on your risk-stratification process, provide targeted, proactive, relationship-based (longitudinal) care management to all patients identified as at increased risk, and likely to benefit from intensive care management. 2.c. Provide short-term (episodic) care management, including medication reconciliation, to patients following hospital admission/discharge/transfer (including observation stays) and, as appropriate, following an ED discharge. 2.d. Ensure patients with ED visits receive a follow-up interaction within one week of discharge. 2.e. Contact at least 75 percentof patients who were hospitalized in target hospital(s) (including observation stays) within two business days.	Complete Track 1 requirements, but also **maintain and review** risk stratification, and: 2.f. For patients receiving longitudinal care management, use a plan of care containing at least patients' goals, needs, and self-management activities that can be routinely accessed and updated by the care team.	2.a. In PY 1, **Track 1** practices could use any risk-stratification approach. As of PY 2, CMS required them to use a two-step process. (This requirement was already in place for Track 2 in PY 1.) In PY 1, CMS required **Track 2** practices to use a two-step process. In PY 2, CMS required them to also maintain and review that process.

Table 4.1. ***(continued)***

Track 1[a]	Track 2	Changes to requirements from PY 1 to PY 2
3. Comprehensiveness and coordination		
3.a. **ENHANCED for Track 1:** Enact collaborative care agreements with at least two groups of specialists identified based on analysis of CMS/payer partners' reports. 3.b. Using CMS'/payer partners' data, track and achieve timeliness of notification and information transfer from hospitals and EDs responsible for the majority of your patients' hospitalizations and ED visits. 3.c. **NEW for Track 1:** Develop a plan for implementing at least one option from a menu of options for integrating behavioral health into care, based on an assessment of practice capability and population need.	Complete Track 1 requirements, but with the requirement to **implement** a behavioral health option (instead of just planning for implementation), and: 3.d. **ENHANCED for Track 2:** Address common psychosocial needs for at least your high-risk patients: • Routinely assess patients' psychosocial needs. • Prioritize common needs in your practice population, and maintain an inventory of resources and supports available to address those needs. • Establish relationships with at least two resources and supports that meet patients' most significant psychosocial needs. 3.e. **NEW for Track 2:** Develop a plan to provide comprehensive medication management to patients discharged from the hospital and those receiving longitudinal care management. 3.f. **ENHANCED for Track 2:** Define at least one subpopulation of patients with specific complex needs, develop capabilities necessary to better address those needs, and measure and improve the quality of care and utilization of this subpopulation.	3.a. In PY 1, CMS required **Track 1** practices to identify high-cost, high-volume specialists serving their patient population. Starting in PY 2, CMS required Track 1 practices to enact collaborative care agreements with at least two of those groups (already a Track 2 requirement in PY 1). 3.c. In PY 2, CMS started requiring **Track 1** practices to develop a plan for implementing behavioral health (already a Track 2 requirement in PY 1). 3.d. In PY 1**,** CMS required **Track 2** practices to assess their patients' psychosocial needs and conduct an inventory of resources needed to address those needs. In PY 2, CMS required Track 2 practices to maintain an inventory of resources needed to address common patient needs and establish relationships with at least two of those resources. 3.e. In PY 2, CMS started requiring **Track 2** practices to provide comprehensive medication management. 3.f. In PY 1, CMS required **Track 2** practices to identify a capability to address the needs of a subpopulation of patients with complex needs. In PY 2, CMS required practices to develop that capability.

Table 4.1. ***(continued)***

Track 1[a]	Track 2	Changes to requirements from PY 1 to PY 2
4. Patient and caregiver engagement		
4.a. **ENHANCED for both tracks:** Convene a Patient and Family Advisory Council at least **three times** in PY 2 and integrate recommendations into care and quality improvement activities, as appropriate. 4.b. **ENHANCED for Track 1:** Implement self-management support for at least three high-risk conditions.	Complete Track 1 requirements, but also hold Patient and Family Advisory Council meetings **quarterly** (instead of three times per year)**,** and: 4.c. **NEW for Track 2:** Identify and engage a subpopulation of patients and caregivers in advance care planning.	4.a. In PY 2, CMS required **Track 1 and Track 2** practices to hold more frequent Patient and Family Advisory Council meetings. The requirement increased from once in PY 1 to three times a year in PY 2 for Track 1 practices and from twice a year to quarterly for Track 2 practices. 4.b. In PY 1, CMS required **Track 1** practices to assess their capabilities and plan for self-management support. In PY 2, CMS required Track 1 practices to provide that support (already a Track 2 requirement in PY 1). 4.c. In PY 2, CMS began requiring **Track 2** practices to engage patients in advance care planning.
5. Planned care and population health		
5.a. Use feedback reports provided by CMS and payer partners at least quarterly on at least two utilization measures at the practice level and practice data on at least three electronic clinical quality measures (derived from the EHR) at both the practice and panel levels to inform strategies to improve population health management.	Complete Track 1 requirement and: 5.b. Conduct care team meetings at least weekly to review practice- and panel-level data from CMS and payer partners and internal monitoring and use these data to guide testing of tactics to improve care and achieve practice goals in CPC+.	No changes.

Source: Center for Medicare & Medicaid Innovation. "2018 CPC+ Implementation Guide: Guiding Principles and Reporting." January 30, 2018.

[a] In PY 1, CMS required Track 1 practices that had previously participated in CPC Classic to satisfy some of the additional Track 2 requirements to build on their CPC Classic work. Specifically, in PY 1, CMS required Track 1 CPC Classic practices to enact collaborative care agreements with specialists (3.a.), work to meet their patients' behavioral health needs (3.c.), hold two PFAC meetings (as opposed to one as required for other Track 1 practices (4.a.), and provide self-management support (4.b.). In PY 2, CMS required all Track 1 practices, regardless of their participation in CPC Classic, to meet these requirements.

ED = emergency department; EHR = electronic health record; eVisit = electronic visit; PY = Program Year.

Methods: Understanding how findings differ by practice characteristics, characterizing interview data, and identifying data sources

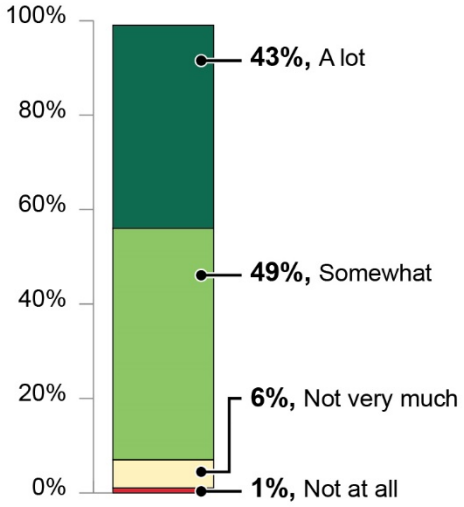
- **Understanding how findings differ by practice characteristics.** We considered whether there were meaningful differences by practice type, including differences by track, ownership (system-owned or independent), participation in the Medicare Shared Savings Program, and size. In general, we describe notable differences; if differences are not described, the findings were similar over time and across different types of practices.
- **Characterizing interview data.** For most topics covered in deep-dive interviews, we have data from 21 to 24 practices. In Chapter 3, Section 3.2.1.A, we describe how we characterize findings from those practices.
- **Identifying data sources.** For most topics, we present findings that integrate data across multiple sources (i.e., deep-dive interviews, CPC+ Practice and Beneficiary Surveys, and care delivery reporting data). In the more detailed supplemental report, we identify the specific data sources associated with each finding.

4.2. Practices' perspectives of and overall approach to CPC+ in PY 2

Practices' overall impressions of CPC+. CPC+ practices were satisfied with their decision to join CPC+. In response to the 2018 CPC+ Practice Survey, 64 percent of practices reported that, based on their overall experience with CPC+, they would be "very likely" to participate in CPC+ again if given the opportunity, and another 28 percent of practices reported they would be "somewhat likely" to do so. Practices also perceived improvements from participating (Figure 4.1). Most practices (92 percent) reported that CPC+ improved the quality of care they provided to patients "somewhat" or "a lot." Two-thirds of practices, however, reported on the 2018 CPC+ Practice Survey that meeting the care delivery requirements was "somewhat" (49 percent) or "very" (17 percent) burdensome.

Figure 4.1. Percentage of practices that reported CPC+ had improved the quality of care they provide a lot, somewhat, not very much, or not at all in PY 2

Most practices (92 percent) reported that CPC+ improved the quality of care they provided to patients "somewhat" or "a lot."



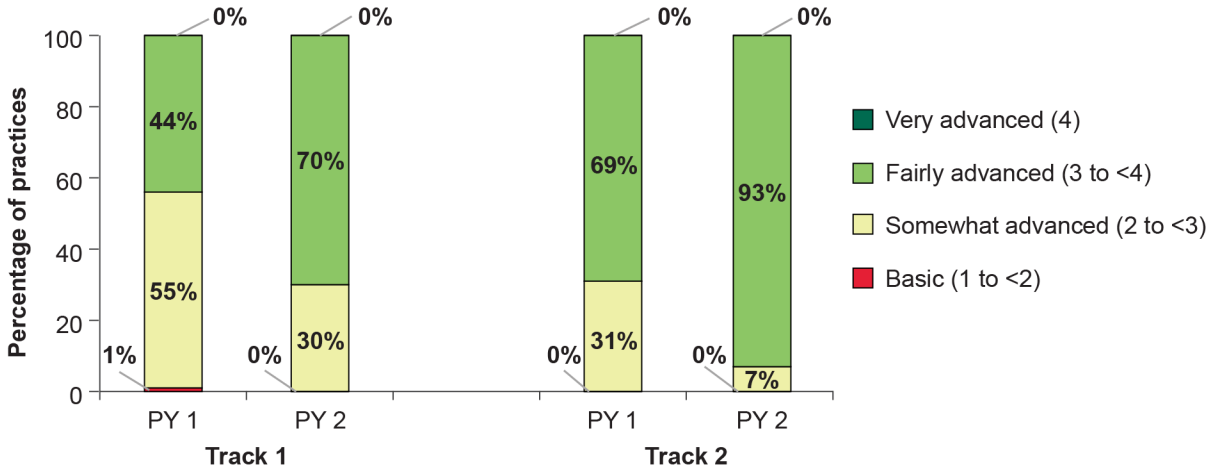
Source: Mathematica's analysis of data from the independent evaluation's 2018 CPC+ Practice Survey.

Notes: N = 2,754 CPC+ practices.

Practices' progress implementing CPC+. Practices in both tracks reported on the CPC+ Practice Survey that they made significant improvements to care delivery during the first two years of CPC+. The modified Patient-Centered Medical Home Assessment (M2-PCMH-A), which is included in the CPC+ Practice Survey, captures approaches to care delivery in nine areas. These are loosely related to but not a comprehensive measure of practices' performance on the Comprehensive Primary Care Functions and care delivery requirements. (Individual survey items are shown in Table 4.C.2. of the supplemental report appendix.) The percentage of practices that provided responses indicating that they provided fairly advanced care overall increased by approximately 25 percentage points for both tracks, but was higher in each year for Track 2 practices (Figure 4.2).

Figure 4.2. Distribution of regression-adjusted mean overall M2-PCMH-A scores, by program year and track

The percentage of practices that provided responses indicating that they provided fairly advanced care overall increased for both tracks, although there remained room for improvement.



Source: Mathematica's analysis of data from the independent evaluation's 2017 and 2018 CPC+ Practice Surveys.

Notes: N = 1,288 Track 1 practices and 1,458 Track 2 practices. Practices rated their approaches to care delivery on a scale from 1 to 4. Mathematica summarized practices' responses and classified their summary scores by how advanced their approaches were.

M2-PCMH-A = modified version of the Patient-Centered Medical Home-Assessment; PY = Program Year.

Practices that did not participate in CPC Classic on average had larger improvements than practices that participated in CPC Classic. Although practices that participated in CPC Classic operated at more advanced levels than those that did not participate in CPC Classic in both PY 1 and PY 2, practices that did *not* participate in CPC Classic experienced larger gains in their M2-PCMH-A scores between the program years. This is in part because they were less advanced when they began CPC+ and thus had more opportunity for improvement. There was a similar but smaller difference between practices that had prior participation in broader primary care transformation efforts that included participation in CPC Classic or the Multi-Payer Advanced Primary Care Practice (MAPCP) Demonstration, or Patient-Centered Medical Home (PCMH) recognition compared to practices without such experience.

Deep-dive practices focused on the care delivery requirements in PYs 1 and 2, though practices also engaged in a few practice improvement activities outside of the CPC+ requirements. In PY 2, many deep-dive practices prioritized work on the following functions:

Care management, often focusing on providing longitudinal care management and conducting ED and hospital follow-up.

Comprehensiveness and coordination, focusing especially on integrating behavioral health into primary care.

Planned care and population health, with many practices reporting that they engaged in QI activities—such as hiring or identifying dedicated QI staff—that fell outside of the care delivery requirements.

When care delivery requirements were the same for Track 1 and Track 2 practices, practices in both tracks often approached those requirements in similar ways and made similar progress. However, Track 1 practices were less likely than Track 2 practices to meet a few of the care delivery requirements. For example, a smaller percentage of Track 1 practices than Track 2 practices (61 versus 76 percent) reported that they had formal information-sharing agreements with EDs and hospitals. Also, Track 1 practices were less likely than Track 2 practices to report following up with most or all patients discharged from the hospital within three days of discharge (65 percent of Track 1 versus 75 percent of Track 2 practices).[13]

Many Track 1 practices were also doing some work related to Track 2-only requirements, although, as expected, Track 2 practices were more likely to meet most of those requirements. Notably, Track 1 practices were as likely as Track 2 practices to report implementing two activities only required of Track 2 practices: (1) conducting advance care planning with patients at high risk and (2) maintaining inventories of psychosocial resources to meet patients' social needs. Track 1 practices also reported work toward other Track 2-only requirements, such as offering alternative visits to patients and screening at least some patients for psychosocial needs, though higher percentages of Track 2 practices were doing both activities, as anticipated.

Although practices in both tracks made progress in PY 2, practices had additional work to do in the final three years of CPC+. Most notably, practices reported that not all patients who could benefit from new services—including longitudinal care management, behavioral health, and alternatives to traditional office visits—received those services, in part because practices lacked sufficient staff to meet patients' needs. And deep-dive practices commonly indicated that they had to take additional steps to more deeply integrate required activities—including risk stratifying patients, using care plans, integrating behavioral health, and coordinating with social service organizations—into their workflows.

[13] The relevant care delivery requirement states: Contact at least 75% of patients who were hospitalized in target hospital(s) (including observation stays) within two business days.

Factors influencing practices' CPC+ work. CPC+ practices experienced a number of factors that affected implementation across one or more Comprehensive Primary Care Functions. The findings about these factors highlight the importance of identifying and understanding contextual factors that influence whether and how CPC+ practices change care delivery. Many of these contextual factors are beyond the immediate control of individual CPC+ practices (see the logic model shown in Figure 1.2 in Chapter 1). Practices in both tracks reported similar factors supported and hindered their work.

- **Supportive factors.** Several factors that supported CPC+ implementation in PY 1 also facilitated practices' work in PY 2. These include (1) practices' perception that a particular required strategy or approach will improve quality of care for their patients, (2) a team-based approach to care, (3) affiliation with a larger health care organization, and (4) advanced health IT functionalities. However, practices placed more emphasis on a couple of facilitating factors in PY 2 than in PY 1. For example, as practices ramped up their work for CPC+ in PY 2, they increasingly reported that *having adequate staff* (such as staff dedicated to care management and to screening patients for social needs) to provide care was important. As in PY 1, many deep-dive practices said that the financial resources made available to them through CPC+ allowed them to hire staff, which facilitated making care delivery changes. In addition, practices indicated that the *relationships they developed with external providers* (including hospitals, EDs, and specialists) in PY 1 became critical for continuing and expanding their work on care management and care coordination in PY 2.

> **"We want to be able to provide services to [patients] without it being extra burden on the providers and staff we have. We've hired more [staff] so that we're less stressed."**
>
> ***—— Practice manager at a small, independent, Track 2 practice***

- **Hindering factors.** All of the factors that hindered CPC+ implementation in PY 1 continued to challenge practices' ability to implement CPC+ in PY 2. These challenges include (1) practitioner and staff overload, (2) difficulties engaging patients in longitudinal care management and self-management efforts, (3) competing priorities associated with providing comprehensive primary care within the current FFS payment system, and (4) health IT functionalities that practices perceive to be unsatisfactory. However, challenges related to the *time and staff required to implement CPC+ became more pervasive* as practices continued their work in PY 2 and the care delivery requirements increased**.** In contrast, a few barriers to implementation in PY 1 lessened in PY 2. For example, fewer deep-dive practices reported difficulties integrating care managers into workflows in PY 2. Practices' perceptions that some care delivery requirements were not beneficial also waned somewhat in PY 2.

Closer look: Health systems' approaches to CPC+

Practices owned by a hospital or health system continued to approach implementation differently than independent practices did. Most systems adopted a fairly standardized approach to CPC+ implementation across their practices in PY 1 and PY 2, although the level of flexibility they gave practices to adapt workflows to their contexts varied.

Many system leaders provided practices clinical support, administrative support, and/or education and training to help them meet CPC+ care delivery and reporting requirements. Most notably, many systems provided practices staff such as care managers, care coordinators, pharmacists, behavioral health specialists, psychologists, social workers, and dietitians, typically allocating support across practices in their system based on practice size and patient volume.

Several system leaders also reported using approaches that could offset potential decreases in revenue that might occur if CPC+ practices achieve their goals to reduce hospitalizations or ED admissions. These systems, for example, described pursuing opportunities to increase market share (the size of the population they serve) and generate revenue by investing more in urgent care and express care clinics. A few system leaders said they were also expanding their ambulatory surgery centers and their affiliations with specialists.

4.3. Practices' progress and areas for improvement by Comprehensive Primary Care Function

4.3.1. Access and continuity

CPC+ encourages practices to improve patients' access to primary care and the continuity of the care provided. CPC+ defines access to care as the availability of health services when patients need and want them, and continuity of care as the creation of long-term, trusting relationships between patients and practitioners to enable effective provision of care (CMMI 2018). Access to comprehensive primary care is expected to promote health and the adoption of healthy behaviors that can help patients prevent and manage disease (ODPHP n.d.). Access to a regular source of primary care also can prevent unnecessary and costly care, such as avoidable ED visits.

Empanelment and continuity of care. Nearly all practices empaneled a high proportion of their patients in both PY 1 and PY 2. CPC+ required all practices to "empanel" or assign each of their active patients to a practitioner and/or care team, with consideration of patients' and caregivers' preferences, to promote continuity of care. In PY 2, many deep-dive practices reported that they had not only made initial assignments but were beginning to routinely review patient panels to make sure assignments were up to date and had started measuring continuity of care as newly required of CPC+ practices in PY 2. However, only a few deep-dive practices reported actively using information on the level of continuity to improve the way they provide care.

24/7 access. As required for practices in both tracks, almost all practices (99 percent) reported to CMS that patients had 24/7 access to a practitioner who has real-time access to the EHR. Many practices (80 percent) reported to CMS that this coverage was provided by a care team member at the practice. These efforts often pre-dated CPC+. Moreover, in PY 2, approximately half of practices reported to CMS that they provided office visits on the weekend, evening, or early morning when patients needed them, and many deep-dive practices indicated that they reserved daily appointment slots for patients with acute needs.

Closer look: Medicare FFS beneficiaries' experience with 24/7 access

In line with our practice findings, according to the 2018 CPC+ Beneficiary Survey,* beneficiaries in Track 2 practices who contacted their doctor's office with a health question outside of regular office hours were more likely than beneficiaries in comparison practices to report receiving a timely answer to their health questions (67 versus 60 percent). (Comparison practices are nonparticipating practices that were similar to CPC+ practices before CPC+ began.) However, we did not find a similar, difference among beneficiaries served by Track 1 practices and comparison practices (60 versus 62 percent). It is not clear why the finding differed by track.

** See Chapter 5 for more information on the CPC+ Beneficiary Survey methods and related findings.*

Alternative visits. To further enhance access to care, 97 percent of Track 2 and 70 percent of Track 1 practices reported to CMS that they offered alternative visits, but such visits were not offered regularly to all patients who could benefit from them. Although only required of Track 2 practices, most deep-dive practices in both tracks reported that they offered at least one type of alternative visit to meet patients' needs in PY 2, up from only a few deep-dive practices in PY 1. Many deep-dive practices reported that home visits were the most common type of alternative visit provided (several also offered visits to nursing homes or other facilities). In reporting to CMS, the most common alternative visits provided to some, most, or all patients noted across both tracks were visits to nursing facilities, hospitals, or senior centers (offered by about 40 percent of practices in both tracks) followed by home visits (offered by 27 percent of Track 1 and 45 percent of Track 2 practices). Medical visits using an electronic exchange were more popular among Track 2 practices (57 percent) than among Track 1 practices (26 percent). However, most practices reported to CMS that they did not offer alternative visits to most of the patients they thought could benefit from them (Figure 4.3).

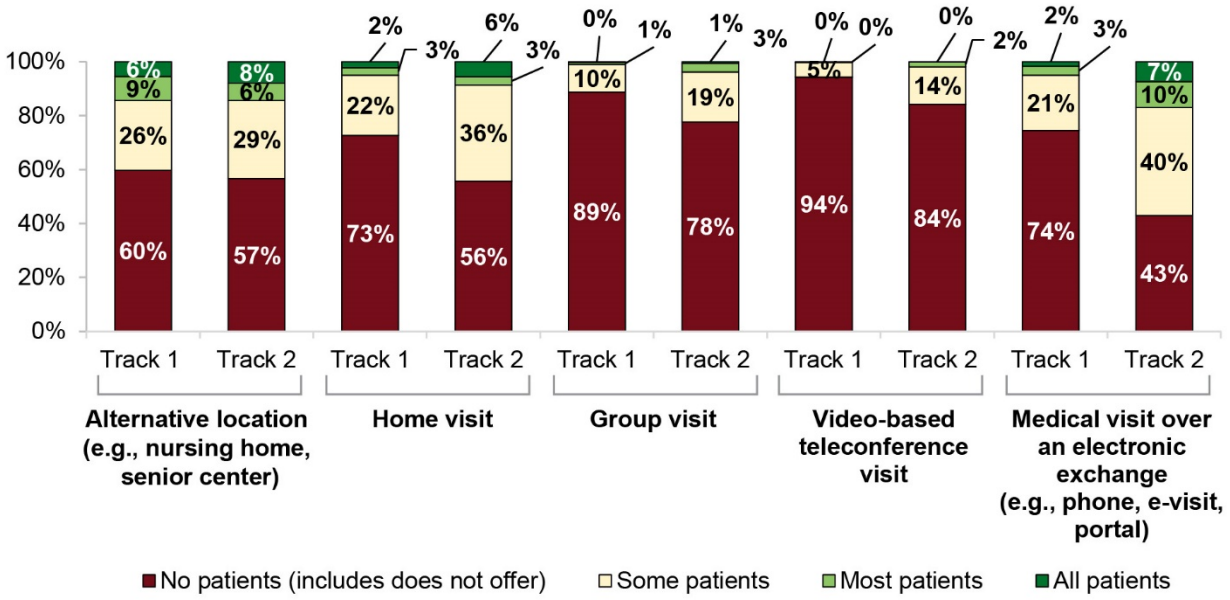
In both PY 1 and PY 2, several deep-dive practices discussed challenges with billing for alternative visits. For example, of the several Track 2 deep-dive practices that said they did not implement alternative visits in PY 2, a few reported as a barrier the belief that alternatives to FFS payments (including CMS' Comprehensive Primary Care Payment for Track 2 practices[14]) were inadequate to cover the costs of implementing them. Additionally, in both years, a few deep-dive practices said they were concerned that if they began to offer phone visits, some payers would

[14] See Chapter 3 for more information on the Comprehensive Primary Care Payment and other CPC+ payments from CMS and payer partners.

not reimburse for them or patients would be unwilling to pay a copay for a service that practices had traditionally provided at no cost.

Figure 4.3. Percentage of practices that reported offering alternative visits to various proportions of the patients who could benefit from them, by visit type, in PY 2

Practices reported that they did not offer alternative visits to many patients they believed could benefit from them.



Source: Mathematica's analysis of 2018 practice-reported care delivery data submitted to CMS.

Notes: N = 1,270 Track 1 practices and 1,445 Track 2 practices. Practices were given the following estimates to guide responses to this question and give their best guess: none (0%); some (up to 50% of all patients); most (50–95%), or all (95–100%).

PY = Program Year.

4.3.2. Care management

CPC+ identifies care management for patients with complex needs or high health care costs as a hallmark of comprehensive primary care. The term "care management" describes a set of proactive activities intended to improve health outcomes and reduce overutilization, harm, and waste (CMMI 2018).

Risk stratification. In PY 2, CPC+ asked practices to use a two-step risk-stratification process to identify patients who could benefit from care management, such as those with multiple chronic conditions. The required steps were (1) applying a data-driven algorithm to assign a risk score, and (2) adjusting risk scores using care team members' clinical knowledge.

Most practices (93 percent) in both tracks reported to CMS that they used a two-step risk-stratification process in PY 2, although data from deep-dive findings suggest that many practices did not consistently assign risk scores to patients. Several deep-dive practices reported they began to use risk stratification at the beginning of CPC+ and a few said that they had improved existing processes after joining CPC+. However, deep-dive practices also described challenges with

consistently using risk scores, including lack of buy-in among practitioners and staff regarding the value of risk scores and insufficient or no EHR functionality to support the risk-stratification process.

Longitudinal care management. Practices in both tracks were required to offer longitudinal care management that provides targeted, ongoing, proactive support to all patients whom the practice identified as being at high risk and likely to benefit from intensive care management. Longitudinal care management includes providing support and education to high-risk patients to monitor and manage their chronic conditions, working with patients during primary care visits and between visits, and monitoring transitions in care such as after a hospitalization. To support care management, CPC+ also required that Track 2 practices use care plans that document and track patients' needs and how the practice addresses them.

More practices offered care management services to their patients at high risk in PY 2 than in PY 1. The proportion of practices that reported on the CPC+ Practice Survey offering care management at their practice or larger health care organization, as required by CPC+, increased by 13 percentage points from 81 percent in PY 1 to 94 percent in PY 2.[15] Most deep-dive practices reported that care managers provided care management services via phone or in person to patients with complex medical needs.

Despite more practices offering care management, practices continued to place a low percentage of patients in the highest risk tier, and of those, less than one-third received longitudinal care management by the last quarter of PY 2. Based on practices' reports to CMS, the median percentage of empaneled patients placed in the highest risk tier was 2.4 percent. Of these patients, the median percentage receiving longitudinal care management was 30 percent (Figure 4.4). These findings were similar in both tracks. However, independent practices had a higher median percentage of patients in the highest-risk tier receiving longitudinal care management compared to practices owned by a hospital or health system (46 versus 22 percent), even though independent and system-owned practices had similar proportions of patients in the highest-risk tier (2.6 and 2.2 percent, respectively).

Several deep-dive practices said that they did not have sufficient care management staff to serve all patients with complex medical needs who would benefit from longitudinal care management. According to these deep-dive practices, existing staff were stretched too thin (with larger caseloads than they could manage) and practices faced challenges in hiring additional staff. In PYs 1 and 2, several deep-dive practices reported that they would hire additional care managers if funding and a skilled workforce were available. For example, in PY 2, one practice noted that it is challenging to hire care managers who have the knowledge, skills, and personality traits—such as patience, empathy, attention to detail, and a sense of "tough love" toward patients—that a good care manager needs.

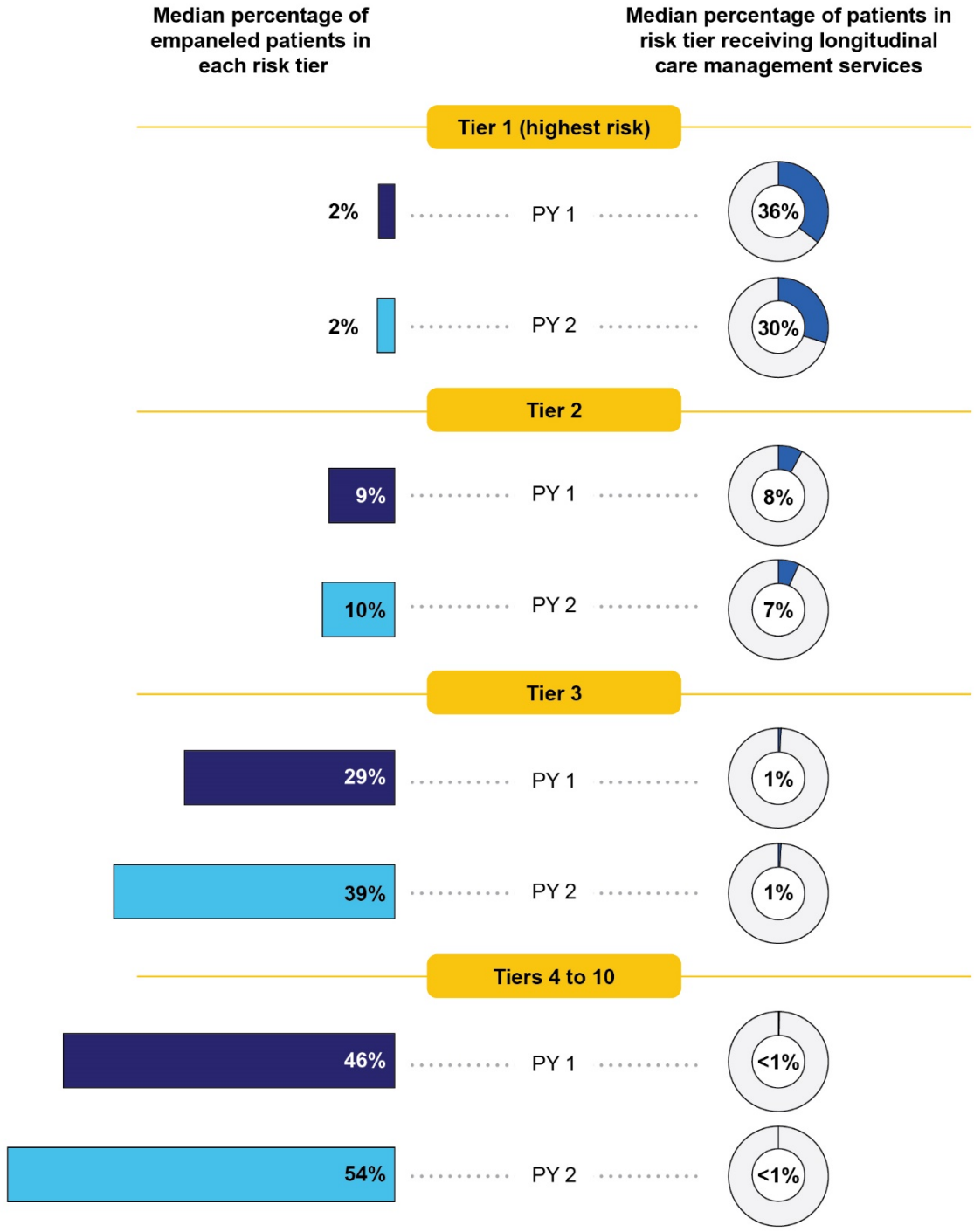
"Sometimes, we see a lot of our time being devoted to the neediest and not being able to get to everyone we want to be able to because there's more patients [with complex medical needs] than we have the resources to fully meet."

— Care manager at a medium-size, Track 2 system-owned practice

[15] The remaining 6 percent of practices reported in the 2018 CPC+ Practice Survey that they did not provide care management services or relied on an outside organization (such as a health insurance plan) to do so.

Figure 4.4. Comparison of patients' receipt of longitudinal care management services in PY 1 and PY 2

As in PY 1, CPC+ practices reported to CMS that the median percentage of empaneled patients in the highest-risk tier was 2 percent. Of these patients, just under a third were receiving longitudinal care management in PY 2.



Source: Mathematica's analysis of 2017 and 2018 practice-reported care delivery data submitted to CMS.

Figure 4.4. ***(continued)***

Notes: Practices defined the number and criteria for as many as 10 risk tiers used in risk stratification. We use the term "Tier 1" to refer to the highest-risk tier. We provide the median number of empaneled patients and the percentage receiving care management services that practices reported for Tiers 1–3 here, and for combined Tiers 4–10. Practices were only included in each calculation if they had at least one patient in that risk tier. The number of practices reporting in each risk tier varied by year.

For Q4 2017, there were 2,642 practices included in Tier 1; 2,566 practices included in Tier 2; 2,417 practices included in Tier 3; and 1,525 practices included in Tiers 4 to 10. For Q4 2018, there were 2,638 practices included in Tier 1; 2,705 practices included in Tier 2; 2,626 practices included in Tier 3; and 1,636 practices included in Tiers 4 to 10.

PY = Program Year.

In addition to staffing challenges, many deep-dive practices had difficulty in both program years engaging patients in longitudinal care management services. Deep-dive practices reported that patients sometimes were reluctant to engage in longitudinal care management, faced psychosocial barriers to participation, were difficult to contact, or did not want to change their behaviors or lifestyle.

Moreover, the extent to which practitioners and care managers at Track 2 practices understood and used care plans remained unclear. Although care managers at several Track 2 deep-dive practices used care plans as CPC+ envisioned to support longitudinal care management, practitioners and staff from several other deep-dive practices continued to use the term "care plan" to reference other clinical documentation (typically after-visit summaries and progress or encounter notes). Additionally, nearly all deep-dive practices faced challenges using their EHRs to create, access, and update care plans.

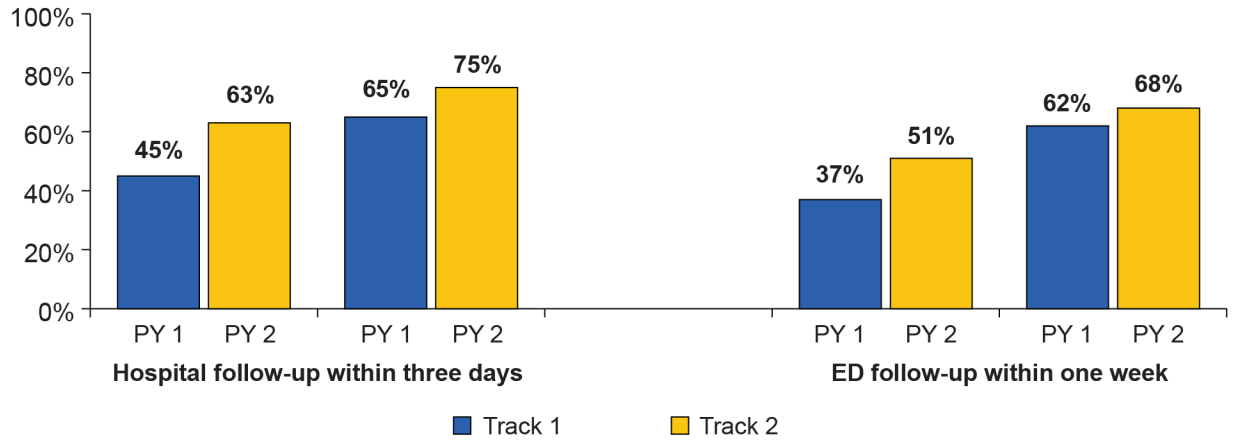
Episodic care management. In addition to providing longitudinal care management for patients with complex needs, CPC+ also required all practices to provide short-term or episodic care management to patients who experience an acute event, such as a hospitalization or ED visit.

Nearly all deep-dive practices provided episodic care management in both PY 1 and PY 2, and used a range of staff to do so. Many deep-dive practices relied on care managers to provide episodic care management (a few of them used the same care manager who provided longitudinal care management), whereas several other deep-dive practices used medical assistants and a couple of others relied on patient navigators or health coaches for this work.

Practices reported improving the timeliness of episodic care management in PY 2. More practices reported to CMS that episodic care management staff followed up with most or all patients within three days of discharge from a hospital and within one week of an ED visit in PY 2 than in PY 1 (Figure 4.5). Moreover, more practices reported that this follow-up routinely occurred because they had arrangements in place with the ED and hospital to track these patients and ensure timely follow-up than in PY 1 (Figure 4.6).

Figure 4.5. Percentage of practices that reported conducting hospital follow-up within three days and ED follow-up within one week for most patients, by track and program year

More CPC+ practices reported following up with most patients in PY 2 than in PY 1 within three days of discharge from a hospital and within one week of an ED visit.



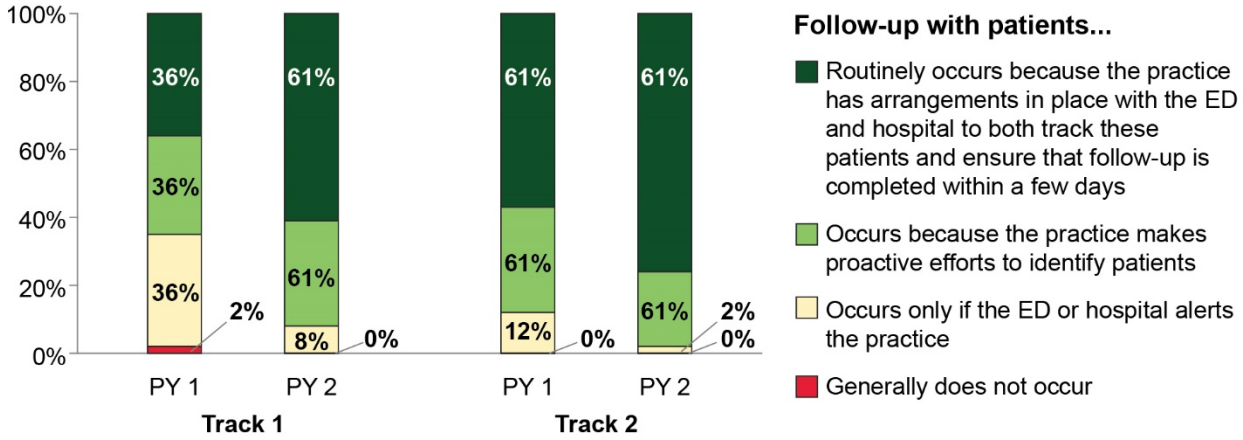
Source: Mathematica's analysis of data from the independent evaluation's 2017 and 2018 CPC+ Practice Surveys.

Note: N = 1,302 Track 1 practices and 1,459 Track 2 practices. Due to item nonresponse, denominators vary slightly across items (by less than 5 percent).

ED = emergency department; PY = Program Year.

Figure 4.6. Percentage of practices that reported various methods for identifying patients for follow-up after ED or hospital discharge, by track and program year

More Track 2 practices than Track 1 practices reported having arrangements in place with hospitals or EDs to track their patients' discharges. The proportion of practices with arrangements in place increased from PY 1 to PY 2 for both tracks.



Source: Mathematica's analysis of data from the independent evaluation's 2017 and 2018 CPC+ Practice Surveys.

Note: N = 1,304 Track 1 practices and 1,461 Track 2 practices. Due to item nonresponse, denominators vary slightly across items (by less than 5 percent).

ED = emergency department; PY = Program Year.

Closer look: Medicare FFS beneficiaries' experience with episodic care management

Findings from the 2018 CPC+ Beneficiary Survey were consistent with CPC+ practices' reports of increased timeliness of follow-up after an ED or hospital discharge. Among beneficiaries who reported an ED visit in the past six months, Medicare FFS beneficiaries seen by Track 1 practices were more likely than beneficiaries in comparison practices to report that they received timely follow-up from their doctor's office within a week (65 versus 59 percent). Similarly, Medicare FFS beneficiaries seen by Track 2 practices were more likely than beneficiaries in comparison practices to report that they received follow-up within three days of a hospitalization (60 versus 54 percent). However, for each finding, we only found significant differences for one track.

** See Chapter 5 for more information on the CPC+ Beneficiary Survey methods and related findings.*

4.3.3. Comprehensiveness and coordination

CPC+ encourages practices to provide comprehensive and coordinated care. CPC+ uses the term "comprehensiveness" to refer to a primary care practice meeting most of the medical, behavioral health, and health-related social needs of its patient population. "Coordination" refers to the primary care practice's central role in helping patients and caregivers navigate a complex health care system—including identifying and communicating with specialists and assisting with care transitions. Coordination also involves helping patients and caregivers access community resources to meet their needs (CMMI 2018).

Coordination with specialists, EDs, and hospitals. In PY 2, most practices met the two CPC+ requirements regarding care coordination with medical providers: (1) use collaborative care agreements to coordinate with specialists; and (2) track and improve the timeliness of notification and information transfer with hospitals and EDs. Specifically, nearly all practices reported to CMS that they had established collaborative care agreements with one or more specialists in PY 2, up 23 percentage points from PY 1. Additionally, more deep-dive practices reported that they electronically accessed hospital and ED discharge information in PY 2, which they used to follow up with patients in a timely way (as noted above in the episodic care management section).

Still, deep-dive practices reported that lack of health IT interoperability and challenges gaining buy-in from some specialists hampered their efforts to fully coordinate care in PY 2. For example, several deep-dive practices continued to encounter challenges with notification and information transfer with hospitals and EDs, especially when they were using EHRs that did not communicate with each other. In addition, a few deep-dive practices reported that some specialists were reluctant to implement collaborative care agreements.

Behavioral health integration (BHI). To improve comprehensiveness of care, CPC+ required all practices to develop a plan to integrate behavioral health care with primary care, and Track 2 practices were required to work on implementing that plan. CMS outlined two options for practices in both tracks to support patients with behavioral health needs:

1. *Primary Care Behaviorist model.* In this model, a behavioral health specialist (psychologist, social worker, or psychiatric nurse practitioner) is located on site at the primary care practice to provide time limited therapy for patients with behavioral health needs.
2. *Care Management for Mental Illness model.* In this model, practices use a care manager with behavioral health training to support the care management of patients with behavioral health needs.

As in PY 1, practices most commonly chose to focus on the Primary Care Behaviorist model in PY 2. Overall, 43 percent of practices reported to CMS in PY 2 that they were pursuing the Primary Care Behaviorist Model as their primary strategy for addressing behavioral health needs and 32 percent reported pursuing the Care Management for Mental Illness model as their primary strategy. Although CPC+ did not identify using referrals or care compacts with external behavioral health specialists as a recommended method to integrate behavioral health, an additional 20 percent of practices reported using this approach as their primary strategy for addressing behavioral health needs.

In PY 2, many practices in both tracks took steps to integrate behavioral health into their practice, most commonly by co-locating behavioral health specialists at their practice. Specifically, the percentage of practices that reported to CMS that they had a co-located behavioral health specialist—a clinical psychologist, psychiatrist, or clinical social worker—nearly doubled from PY 1 to PY 2 (24 versus 41 percent). And more than three-quarters of practices that selected the Care Management for Mental Illness or the Primary Care Behaviorist model as their primary strategy for addressing BHI reported to CMS that they had established a plan for identifying patients with behavioral health needs (Figure 4.7). Many practices had also taken other steps to integrate behavioral health into their practices, including developing workflows and processes, identifying or hiring staff, and training staff as necessary to address those needs.

Still, in the remaining three years of CPC+, many practices have additional steps to take to fully integrate behavioral health into their practice. Across both tracks, more practices that chose the Primary Care Behaviorist model reported to CMS that they had implemented all four steps for integrating BHI, compared to practices that chose the Care Management for Mental Illness model (Figure 4.8). Regardless of the model selected, a larger proportion of Track 2 practices completed all four implementation steps than Track 1 practices. This is expected, given that CPC+ required practices in Track 2 to begin integrating behavioral health into primary care one year earlier than practices in Track 1.

Figure 4.7. Percentage of practices that reported taking recommended steps to integrate behavioral health in PY 2, by track and BHI model

Practices that identified their primary strategy for addressing behavioral health needs as either the Primary Care Behaviorist or Care Management for Mental Illness model were asked about the steps they took to integrate behavioral health within each of the two options. Many of these practices had established a plan for identifying patients with behavioral health needs. Fewer practices had developed workflows and staff to address those needs.

Source: Mathematica's analysis of 2018 practice-reported care delivery data submitted to CMS.

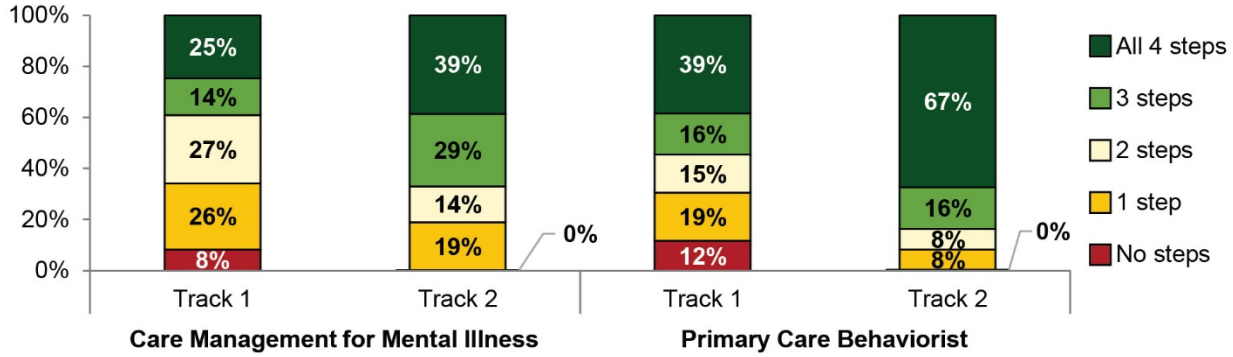
Notes: Care Management for Mental Illness model: N = 425 Track 1 practices and 449 Track 2 practices. Primary Care Behaviorist model: N = 335 Track 1 practices and 830 Track 2 practices. Practices could select all responses that applied.

Twenty-five percent of practices are excluded from this figure because they reported their primary BHI strategy was "referrals or care compacts/collaborative agreements for external behavioral health specialists" (20 percent) or "other" (non specified) approaches (4 percent), and 1 percent of practices reported that they "were not addressing behavioral health needs at their practice."

BHI = behavioral health integration; PY = Program Year.

Figure 4.8. Percentage of practices that reported taking one or more recommended steps to integrate behavioral health in PY 2, by track and BHI model

Practices that identified their primary strategy for addressing behavioral health needs as either the Primary Care Behaviorist or Care Management for Mental Illness model were asked about the steps they took to integrate behavioral health within each of the two options. All Track 2 practices and most Track 1 practices reported that they took at least one step to develop workflows or staff to support behavioral health integration in PY 2. However, many practices have additional steps to complete in later program years. Practices that selected the Primary Care Behaviorist model reported more progress than those that selected the Care Management for Mental Illness model.



Source: Mathematica's analysis of 2018 practice-reported care delivery data submitted to CMS.

Notes: Care Management for Mental Illness model: N = 425 Track 1 practices and 449 Track 2 practices. Primary Care Behaviorist model: N = 335 Track 1 practices and 830 Track 2 practices.

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BHI = behavioral health integration; PY = Program Year.

As in PY 1, several deep-dive practices cited the limited number of behavioral health practitioners in their community as a key barrier to meeting their patients' behavioral health needs. Several deep-dive practices either had not yet hired a behaviorist or had experienced turnover in the position due to the behavioral health labor market in PY 2. This issue was prevalent in all setting types, but it was pronounced in rural locations, where most of the deep-dive practices noted this constraint.

Assess and address social needs. In addition to addressing their patients' medical and behavioral health needs, CPC+ required Track 2 practices to assess patients' social needs and identify resources and supports to meet them. Practices in both tracks made progress toward those goals in PY 2, despite it only being a Track 2 requirement. As in PY 1, practices continued to report to CMS that they had taken steps to screen at least some patients routinely for unmet social needs in PY 2, and more practices reported in PY 2 that they used screening tools (rather than informally assessing patients through ad hoc conversations) to do so. Most deep-dive practices also continued to report that they maintained inventories of social resources that they established in PY 1 and used them to identify community-based organizations to which they referred patients identified with unmet social needs. Moreover, more practices

reported having a designated staff person responsible for actively coordinating resources among patients, the health system, and community service agencies.

Although most Track 2 practices reported to CMS that they had established relationships with social service agencies that address social needs, deep-dive findings suggest that practices need support to formalize those relationships in later years of CPC+. Specifically, in PY 2, few deep-dive practices had relationships with social service agencies that outlined clear processes for referring patients to those organizations and for information sharing.

Comprehensive medication management (CMM). CPC+ also required Track 2 practices to enhance the comprehensiveness of their services in other ways, including developing a plan for providing CMM for patients discharged from the hospital and/or for patients receiving longitudinal care management. CPC+ defines CMM as a collaborative process between the primary care team and a CMM specialist (often a pharmacist). Together, they conduct a medical review for patients at high risk, discuss medication issues (including effectiveness, safety, affordability, and therapy adherence) with the patient, and develop and help patients stick to an action plan to address those issues.

In PY 2, 93 percent of all Track 2 practices had implemented at least one of four steps for CMM implementation: established a plan for identifying patients with CMM needs, developed workflows and processes, identified and/or hired personnel, or trained staff as necessary. Moreover, 63 percent of Track 2 practices reported to CMS that they provided CMM in the last two quarters of PY 2, despite only being required to plan for, rather than provide, these services. Of Track 2 practices providing CMM, about two-thirds delivered this service through co-management with a pharmacist or service either located at the practice (53 percent) or offsite (16 percent).

Develop capability to support patients with complex needs. Deep-dive findings suggest that Track 2 practices need more guidance on how to "develop capabilities necessary to better address" the needs of a "subpopulation of patients with specific complex needs." CMS required Track 2 practices to enhance their capacity to address those needs in PY 2, for example, by expanding their own capabilities, or by collaborating with specialists via strategies such as co-location and co-management for common complex conditions. Many deep-dive practices were not clear on this CPC+ requirement. When asked about developing capabilities to meet a subpopulation's complex needs, many deep-dive practices described work done in service of other care delivery requirements (such as hiring diabetes educators to better address the needs of patients with chronic conditions) that are likely beneficial to patients but that often fell short of the more demanding work that CMS asked Track 2 practices to do for this care delivery requirement.

4.3.4. Patient and caregiver engagement

CPC+ encourages practices to promote patient and caregiver engagement in care delivery. This means using patients' and caregivers' experience and expertise to improve processes and accelerate practice change. It also involves building collaborative relationships with patients to help them "self-manage" or achieve their

health goals. Because patients and caregivers see and experience care in ways that practices often do not, they can point out areas for improvement and identify solutions that practices may not have considered (CMMI 2018). Engaged patients equipped with information about their conditions and available services are expected to take a more active role and make more informed choices about their health care (CMMI 2018).

Patient and Family Advisory Councils (PFACs). Most practices convened PFAC meetings to gain input from patients and caregivers and used that input to guide practice improvements in PY 1 and PY 2. Many practices convened a PFAC for the first time during PY 1. And, in response to CMS enhancing the PFAC requirement in PY 2, most practices reported to CMS that they convened PFAC meetings more frequently in PY 2 than in PY 1—at least three times a year for Track 1 practices and at least quarterly for Track 2 practices. Practices also took steps to more formally organize their PFAC. These steps included defining the PFAC's mission and vision, and determining the structure of the PFAC (that is, number of patient members, term lengths, and other meeting logistics).

Changes made by two deep-dive practices in response to PFAC feedback

In response to PFAC feedback that the bills patients received were confusing, a large, system-owned, Track 2 deep-dive practice:

- Asked the billing vendor to revise the bill format to improve clarity, which it did, and
- Encouraged its health system to hire a dedicated billing staff person to address and resolve patients' billing questions, which it did. This staff member now supports all practices in the system.
- Practitioners and staff said that patients expressed appreciation for the changes and valued being able to get assistance in person, rather than through a complicated automated telephone system at the central billing office.

At a small, system-owned, Track 1 practice, patients were unaware of how to prepare for appointments.

- In response, this practice revised its appointment scheduling protocol so that schedulers consistently reminded patients to bring recent lab results and a list of their current medications to appointments. Practitioners and staff said that this change reduced laboratory test duplications and medication interactions.

Self-management support. Practices made notable changes in PY 2 to offer and improve self-management support. As in PY 1, nearly all practices reported to CMS that they implemented self-management support for at least three high-risk conditions, but in PY 2, more practices systematically identified patients for self-management support and helped patients define their own self-management goals.

"You validate [the patients'] feelings and let them know it's not something that they're going through alone. We give them encouragement…help them take the next steps and navigate towards getting help."

— Social worker at a large, system-based Track 1 practice

However, only two-thirds of practices reported to CMS that they always or often train staff in specific self-management support techniques and less than one-third reported always or often measuring patients' skills and progress when implementing self-management support. This lack of staff training may have contributed to deep-dive practices' challenges motivating some patients to participate in self-management support and engage in care management efforts.

Advance care planning. Nearly all practices engaged at least some of their patients with complex needs in advance care planning discussions in PY 2, even though this new requirement applied only to Track 2 practices. Eighty-one percent of practices in both tracks reported to CMS that they discussed their patients' values, goals, and care preferences at the end of life as part of advance care planning conversations. Most practices in both tracks (87 percent for Track 1 and 88 percent for Track 2) also reported to CMS that they assisted patients in understanding and completing relevant documentation such as advance directives, physician or medical orders for life-sustaining treatment, or health care power of attorney.

4.3.5. Planned care and population health

CPC+ encourages practices to organize care delivery to meet the needs of all of their patients. This approach to care delivery is referred to as "planned care and population health" in CPC+. As part of a planned care and population health approach, practices are required to use data and team-based care to proactively identify the needs of patients and efficiently manage their care (CMMI 2018).[16]

Use of data and care team meetings to guide quality improvement. In PY 2, CPC+ required all practices to regularly use eCQMs and data feedback from CMS and payer partners to identify high-priority areas for population health management. CPC+ also required Track 2 practices to hold care team meetings at least weekly to review data. In PY 1 and PY 2, nearly all practices had access to data feedback from CMS and payer partners and to their practice's eCQM data to support this work, and most reported reviewing CMS and payer partner and eCQM data at least quarterly.

"[eCQMs] help us remember to order screenings for patients that might be able to save their life."

— Care manager at a small, system-owned, Track 2 practice

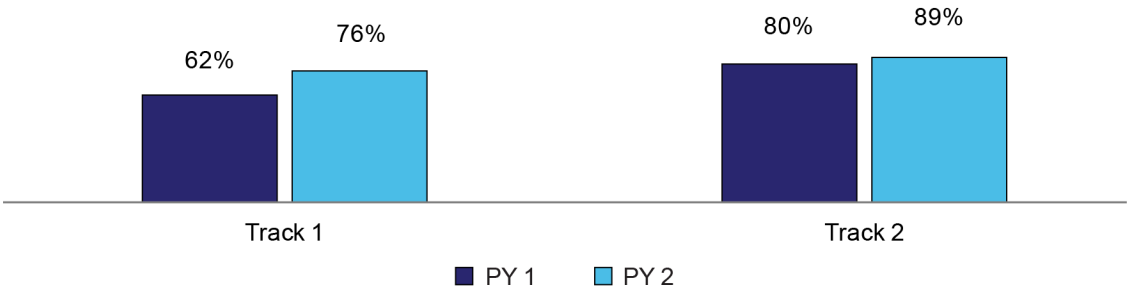
In PY 2, more practices used data and care team meetings to proactively and systematically guide QI changes that affected their full patient population. The proportion of practices that reported that they *usually* used performance measures to guide QI increased, with Track 2 practices remaining more likely than Track 1 practices to report using them in PY 2 (Figure 4.9). The most common type of measure that practices reported routinely using to guide QI was quality-of-care measures (particularly

[16] CMS also financially rewards CPC+ practices that are not in SSP for their performance on claims-based measures of inpatient hospitalization and ED utilization, eCQMs, and patient experience-of-care measures. Track 1 practices can receive up to $2.50 PBPM in payments for performance, and Track 2 practices can receive as much as $4.00 PBPM. Practices participating in SSP are not eligible for these payments because they are part of ACOs that participate in a shared savings program with CMS.

eCQMs), followed by patient experience measures from surveys and, to a lesser extent, cost or utilization metrics. Several deep-dive practices described their efforts to monitor eCQMs, noting that they disseminated eCQM reports to practitioners and staff more frequently in PY 2 and a few attributed this change to CPC+.

Figure 4.9. Proportion of practices that reported usually using performance measures to guide quality improvement activities, by track and program year

Practices reported that they increased use of performance measures to guide QI activities from PY 1 to PY 2. Track 2 practices remained more likely to report that they usually used these measures for QI than Track 1 practices.



Source: Mathematica's analysis of data from the independent evaluation's 2017 and 2018 CPC+ Practice Surveys.

Notes: N = 1,303 Track 1 practices and 1,459 Track 2 practices. Due to item nonresponse, denominators vary slightly across items (by less than 5 percent).

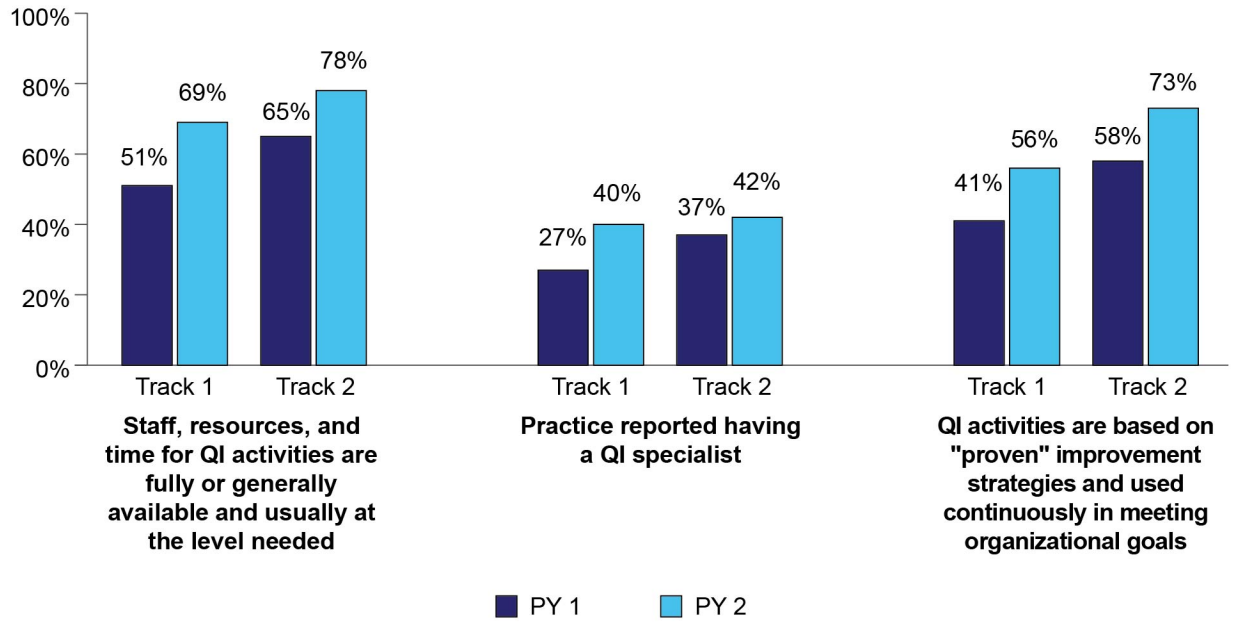
PY = Program Year; QI = quality improvement.

Beyond their work on the care delivery requirements, many practices reported engaging in additional activities to promote planned care and population health in other ways. More practices identified or hired dedicated QI staff, expanded QI teams, and used evidence-based QI strategies in PY 2 than in PY 1 (Figure 4.10). Additionally, deep-dive practices reported initiating activities such as structured huddles to discuss and plan care for individual patients, hiring staff to assist with tracking eCQMs, and assigning existing staff new responsibilities for following up with patients who had gaps in care identified via eCQMs.

Still, practices continued to raise QI-related challenges. Practices continued to report concerns related to the timeliness of the utilization data they received, the accuracy of eCQM data, and challenges in engaging patients in the behavior change necessary to improve these metrics. Limited practitioner and staff time also continued to hinder deep-dive practices' ability to document eCQMs and, for Track 2 practices, to hold care team meetings to review data weekly as recommended by CMS.

Figure 4.10. Proportion of practices that reported having resources for QI and using "proven" QI strategies, by track and program year

Practices reported increasing their focus on QI between PY 1 and PY 2 by dedicating more staff and resources to QI and more consistently using "proven" QI strategies. Track 1 practices reported greater improvement between PY 1 and PY 2 than Track 2 practices, yet Track 2 practices remained more likely to have QI staff and use proven QI strategies than Track 1 practices.



Source: Mathematica's analysis of data from the independent evaluation's 2017 and 2018 CPC+ Practice Surveys.

Notes: N = 1,304 Track 1 practices and 1,461 Track 2 practices. Due to item nonresponse, denominators vary slightly across items (by less than 5 percent).

4.4. Practices' perceptions of sustainability and spread

CPC+ does not explicitly require practices to sustain changes made for CPC+ after it ends, but CMS and its payer partners hope that successful changes to care delivery resulting from CPC+ will endure in the practices and, where relevant, in their systems. For example, health systems and medical groups may standardize workflows and processes across all of their primary care and specialty practices, so that a change required for CPC+ would be implemented in nonparticipating practices as well. We asked deep-dive practices about sustainability and spread in early PY 3 (March to May 2019), just over two years into the five-year model.[17]

[17] In PY 3, CMS announced Primary Care First (PCF), a new alternative payment model for primary care practices (https://innovation.cms.gov/initiatives/primary-care-first-model-options/). CPC+ practices will be eligible to join PCF in 2021. Given the timing of CMS' announcement, we did not ask deep-dive practices about PCF during this round of data collection, and few deep-dive practices brought it up on their own as a potential way to sustain changes begun in CPC+. In our next round of deep-dive data collection, we will explore how PCF is influencing practices' thoughts about sustainability and spread.

Sustainability. Deep-dive practices were interested in sustaining changes made for CPC+, specifically those related to care management, care transitions, BHI, and the use of quality measures and other data. For the most part, practices continued to worry about their ability to afford the salaries of staff newly hired for CPC+ after CPC+ and its payments end. However, because practices remained focused on implementation at the end of PY 2, many perceived that it was too early to plan for sustainability with three years remaining in CPC+. The few practices that had started planning for sustainability were typically researching potential options for ongoing funding.

"I believe that a lot of the things that we're doing [for CPC+] really drive better outcomes and reduce costs… They're great ideas [and] I would like to continue them, but I don't know if some of it will continue because of the time intensiveness of it. And also if it's not aligned towards payments, it sometimes gets difficult to try to drive it."

—System leader of a medium-size, system-owned Track 1 practice

Spread. Hospitals or health systems own about half of CPC+ practices; some of these organizations were spreading CPC+ to non-CPC+ primary care practices (and in a few cases to specialists). For example, in PY 2, several deep-dive practices reported that all primary care practices in their system—regardless of CPC+ participation—had implemented the same or similar changes, and had benefited from shared resources like system-based care managers hired for CPC+.

5. OUTCOMES FOR MEDICARE FFS BENEFICIARIES: CPC+ HAD FEW SMALL IMPACTS OVER THE FIRST TWO YEARS

Key takeaways

Even with practices' progress with transformation, we did not expect to see favorable effects of CPC+ on Medicare expenditures after only two years of the five-year initiative. In line with these expectations, in the first two years, CPC+ had a few, very small favorable impacts on some measures of service use, quality of care, and patient experience, but increased Medicare expenditures by 2 to 3 percent when including CMS' enhanced payments to CPC+ practices for CPC+ and SSP.

5.1. Two-year effects of CPC+ for practices that began in 2017

Primary care practice transformation is a complex process that takes time to implement and manifest in improved patient outcomes. Therefore, we did not expect to see favorable effects of CPC+ implementation on Medicare expenditures for attributed FFS beneficiaries without CMS' enhanced payments after only two years of the five-year initiative. We expected that—if the model were successful—at this stage we would see improvements in measures of service use, quality of care, and patient experience that can be affected by primary care in the short to medium term (for example, ED visits, process-of-care measures for patients with diabetes, or patient-reported access to care).

In Table 5.1, we summarize our findings on the early impacts of CPC+.

Table 5.1. Impacts of CPC+ on outcomes for Medicare FFS beneficiaries in PY 1 and PY 2

	Significant findings[a]		
	Track 1	Track 2	What does it mean?
Service use			
			During the first two years, CPC+:
Acute hospitalizations	–	–	• **Did not impact** the rate of acute hospitalizations.
Outpatient ED visits	-1.3%	-1.3%	• Slightly **reduced** the rate of ED visits.
Ambulatory primary care visits	-0.8%	-1.1%	• Slightly **slowed the growth** of ambulatory primary care visits.
Ambulatory specialty care visits	0.5%	–	• Slightly **increased the rate** of ambulatory specialty care visits for Track 1.
Expenditures			
			During the first two years, CPC+:
Without CMS' enhanced payments for CPC+ and SSP	–	–	• **Did not impact** expenditures when *excluding* payments that CPC+ practices received for CPC+ and SSP in addition to usual payments for services.
With CMS' enhanced payments for CPC+ and SSP	1.9%	3.3%	• **Increased** expenditures when *including* payments that CPC+ practices received from CMS for CPC+ and SSP in addition to usual payments for services.
Quality of care			
			During the first two years, CPC+:
Beneficiaries with diabetes receiving recommended services[b]	0.1–1.1pp	0.3–0.9pp	• Slightly **increased** the percentage of beneficiaries who received various recommended services for diabetes.
Female beneficiaries receiving breast cancer screening	0.7pp	0.7pp	• Slightly **increased** the percentage of female beneficiaries who received breast cancer screening.
Beneficiaries receiving hospice services	0.1pp	0.1pp	• Slightly **increased** the percentage of beneficiaries who received hospice services.
Readmissions	–	–	• **Did not impact** hospital readmission rates.
Patient experience			
			Relative to comparison beneficiaries, in PY 2, beneficiaries served by CPC+ practices reported:
Follow-up after an ED visit	6.0pp	–	• **More timely** follow-up after ED visits for Track 1.
Follow-up after an overnight hospital stay	–	6.2pp	• **More timely** follow-up after hospital stay for Track 2.
Answers to health questions asked outside regular office hours	–	7.0pp	• **More timely** answers from doctor's office to their health-related questions for Track 2.
Other measures of patient experience (10 composite measures and 36 other individual measures)	–	–	• **Similar experiences** with many other aspects of care for both tracks.

Source: Mathematica's analysis of Medicare claims data from Jan. 2013–Dec. 2018 for service use, expenditures, and quality-of-care measures and of data from the independent evaluation's 2018 CPC+ Beneficiary Survey for patient experience measures.

[a] This table includes estimates that were statistically significant at the 10 percent level on a two-sided test, and for beneficiary survey results, also differed meaningfully for CPC+ and comparison beneficiaries (by 5 percentage points or more). Dashes are used to indicate non-significant findings. For measures of service use, expenditures, and quality of care, we base estimates of the impact on a difference-in-differences analysis. For measures of patient experience, we compare survey responses at one point in time for CPC+ and comparison beneficiaries.

[b] The recommended services that we include in our analysis are receiving a HbA1c test, eye exam, and attention for nephropathy, and composite measure of receiving all three services.

ED = emergency department; FFS = fee-for-service; PY = Program Year; SSP = Medicare Shared Savings Program; pp = percentage points.

Understanding the effect of CPC+ on Medicare FFS beneficiaries

Comparison group. We are comparing outcomes for attributed Medicare FFS beneficiaries served by CPC+ practices to those served by comparison practices. To form the comparison group, we selected practices that were not participating in CPC+ but were similar in other ways to CPC+ practices before CPC+ began. CPC+ and comparison practices had similar (1) Medicare FFS beneficiaries (with similar characteristics, chronic conditions, Medicare expenditures, hospitalizations, and ED use); and (2) practice characteristics (such as size, health system ownership status, experience with primary care transformation and EHRs, and rural/urban location).

We also used regression models to further (1) adjust for beneficiary risk, (2) improve the precision of our models, and (3) account for remaining differences in beneficiary and practice characteristics at the start of CPC+.

Other details of our methods differ for claims- and survey-based outcomes.

Claims-based outcomes

- **Measures.** We examined the effects of CPC+ on claims-based measures of expenditures, service use, and selected aspects of quality for Medicare FFS beneficiaries.
- **Analytic method.** We estimated the impact of CPC+ using difference-in-differences regressions. For this technique, we calculated the mean change in Medicare FFS outcomes from the year before CPC+ to the first two program years for two groups: (1) beneficiaries served by the CPC+ practices and (2) beneficiaries served by comparison practices. We then calculated the change between the two groups. We used a linear regression model controlling for patient characteristics and practice fixed effects, with standard error estimates clustered at the practice level, and weighting for matching and patient eligibility.
- **Sample.** We used claims data to attribute Medicare FFS beneficiaries to practices. Once a beneficiary was attributed to a CPC+ practice for our analysis, we continued to include that beneficiary in future analyses, even if their practice later left CPC+ or if they later got attributed to a non-CPC+ practice. We followed the same approach to identify and track beneficiaries served by comparison practices.

  For Track 1, we compared claims-based outcomes for more than 1.1 million Medicare FFS beneficiaries served by nearly 1,400 CPC+ practices with outcomes for nearly 4 million beneficiaries served by more than 5,000 comparison practices. The corresponding sample sizes in Track 2 were over 1.4 million beneficiaries in more than 1,500 CPC+ practices and over 3.3 million beneficiaries in nearly 4,000 comparison practices.

Methods: Understanding the effect of CPC+ on Medicare FFS beneficiaries *(continued)*

Survey-based outcomes

- **Measures.** The CPC+ beneficiary survey instrument primarily contains items based on the Clinician and Group Consumer Assessment of Healthcare Providers and Systems 6-Month Survey (CAHPS version 3.0). We modified CAHPS survey items and created new survey items to reflect the innovative features of CPC+. We grouped 37 of the 39 survey items on patient experience in the 2018 CPC+ Beneficiary Survey into 10 composite measures (composite measures shown in Figure 5.3; individual survey items shown in Table 5.1 of the supplemental report). These measures organize patients' responses by content areas based loosely on the Comprehensive Primary Care Functions and other domains that are important to CPC+; however, the domains do not map perfectly to the care delivery requirements, nor do they completely capture all aspects of the functions. For example, the care management domain includes some items that align with care delivery requirements (such as timely follow-up care after an ED or hospital visit) as well as questions that relate to care management but are not covered in the care delivery requirements (such as items about prescription medicines or obstacles to taking care of the patient's health). Conversely, other aspects of care management covered in the care delivery requirements were excluded from the survey if patients would be unaware of a practice strategy (for example, risk stratification) or if patients found the concept too difficult to understand during survey pre-testing (for example, care plans).
- **Analytic method.** Medicare FFS beneficiaries reported on their experiences of care at one point in time, approximately one to two years into CPC+ depending on when they completed the survey. Not having a survey before CPC+ began is a limitation because the CPC+ and comparison beneficiaries may have had different experiences of care before CPC+. For our cross-sectional analysis, we used logistic and ordinary least squares regression models. We controlled for patient and practice characteristics, clustered standard errors at the practice level, and weighted for matching, sampling, and nonresponse.
- **Sample.** We received completed surveys from around 42 percent of Medicare FFS beneficiaries who received the survey and were estimated to be eligible to respond in each track for CPC+ and comparison beneficiaries. Our survey analysis included almost 8,000 Medicare FFS beneficiaries who received care from a CPC+ practice at least once in the six months before they completed the survey, and nearly 10,000 beneficiaries who received care from a comparison practice.

5.1.1. Medicare FFS beneficiaries' service use

Practices' work on the five Comprehensive Primary Care Functions may change Medicare FFS beneficiaries' service use. Most notably, CMS expects that, if practices' work improves Medicare FFS beneficiaries' access to care and their health, these beneficiaries will have fewer outpatient ED visits and hospitalizations. CPC+ may also impact other aspects of utilization—including the number of visits Medicare FFS beneficiaries make to primary care practitioners or specialists—but CMS does not have a hypothesis on the direction of those relationships. For example, CPC+ could increase the total number of visits to primary care practices as practices offer more comprehensive services and, potentially, extend their office hours. It is also possible that CPC+ could decrease these visits as practices shift to other non-billable approaches for providing care to patients, such as eVisits or visits with nonbillable staff like care managers. Similarly, the potential direction of the effect of CPC+ on the number of specialist visits is ambiguous. Greater comprehensiveness by primary care practices could reduce specialist visits, but more preventive health screenings could lead to more specialist visits as the result of improved detection of disease.

CPC+ had some effects on Medicare FFS beneficiaries' service use over the first two program years, but these were small. The findings were similar for Track 1 and Track 2 practices and for practices that were and were not in SSP. In the first two years of CPC+, relative to the comparison practices, CPC+ practices:

- **Reduced the rate of outpatient ED visits.** Outpatient ED visits include ED visits that do not lead to a hospitalization, as well as observation stays. Medicare FFS beneficiaries of CPC+ and comparison practices had fewer outpatient ED visits in PY 1 and PY 2 than in the year before CPC+ began. However, the reduction in ED visits was slightly larger for the CPC+ practices. Relative to the comparison group, we estimate that CPC+ led to a small net decrease in outpatient ED visits of about 6.5 visits per 1,000 beneficiaries (1.3 percent; $p < 0.01$ for each track, Table 5.3).
- **Slowed the growth of ambulatory care visits to primary care practitioners.** Both CPC+ and comparison practices saw an increase in the rate of ambulatory care visits to primary care practices during the first two years of CPC+ compared to before CPC+ began, but the increase was smaller for CPC+ practices. Annualized ambulatory care visits increased by 35 fewer visits per 1,000 attributed beneficiaries (0.8 percent; $p < 0.05$) in Track 1, and by 49 fewer visits per 1,000 attributed beneficiaries (1.1 percent; $p < 0.01$) in Track 2, for CPC+ versus comparison practices. The net decrease in these visits was larger in PY 1 than in PY 2 (1.3 versus 0.3 percent in Track 1, and 1.5 versus 0.7 percent in Track 2).
- **Increased the rate of ambulatory visits to specialists in Track 1.** As with primary care visits, the rate of visits to specialists went up for both the CPC+ and comparison practices during the two years of CPC+. In contrast, however, the increase was larger for Track 1 CPC+ practices than for their comparison practices. During the first two years, there was a small net increase in ambulatory visits with specialists among beneficiaries of Track 1 CPC+ practices, relative to comparison practices, of about 20 specialist visits per 1,000 beneficiaries (0.5 percent; $p < 0.05$). This relative increase was larger in PY 2 than in PY 1 (0.7 versus 0.3 percent).

  For Track 2, CPC+ practices and comparison practices had similar growth in ambulatory specialist visits.

There were no effects on acute hospitalizations for either track. Since Medicare payments to hospitals for acute hospitalizations account for nearly one-third of Medicare expenditures, it is unlikely that CPC+ will reduce expenditures without any effect on hospitalizations.

We found reductions in acute care use in the form of fewer outpatient ED visits for CPC+ beneficiaries in both PY 1 and PY 2. Yet the estimated differences are small and, as described in the next section, they do not yield discernable reductions in Medicare expenditures. Moreover, given the small impact, they are unlikely to reflect a major shift in clinical care for most beneficiaries.

5.1.2. Medicare expenditures for FFS beneficiaries

CMS theorized that changes in care delivery made by CPC+ practices would result in a reduction in overall Medicare expenditures that is great enough to offset CMS' enhanced payments. To test this, we analyzed Medicare expenditures for FFS beneficiaries (1) without CMS' enhanced payments made in addition to traditional payments for services and (2) with CMS' enhanced payments.[18] (As we are estimating impacts on Medicare expenditures for FFS beneficiaries, we did not include enhanced payments from other payers in our calculations.) As described in Chapter 3, enhanced payments included payments to CPC+ practices for participating in CPC+ as well as payments to reward their performance on cost, utilization, and/or quality metrics (Table 5.2.).

For Track 2 practices, CMS also provided alternative payments, in the form of CPCPs, which shifted a portion of the payments practices receive for services from FFS to prospective payments. As these are payments *for services*, they are included in Medicare expenditure analyses without and with enhanced payments (Table 5.2).

[18] Medicare Part A and B expenditures without CMS' enhanced payments include (1) traditional FFS payments for Medicare Part A and Part B services and (2) alternative to FFS payments for those services, which CMS provided to practices participating in Track 2 of CPC+ (referred to as the Comprehensive Primary Care Payment). We do not include Medicare Part D payments, payments made by commercial insurers for supplemental Medicare coverage, or the out-of-pocket expenditures of beneficiaries in this measure.

Table 5.2. Summary of CMS' payments included in our analysis of Medicare expenditures for Medicare FFS beneficiaries

Payment type	Practices that receive payment type				Included in expenditures analysis	
	Track 1 Non-SSP	Track 1 SSP	Track 2 Non-SSP	Track 2 SSP	Without CMS' enhanced payments	With CMS' enhanced payments
Enhanced payments in addition to payments for services						
Payments for participating in CPC+						
Care management fees	✓	✓	✓	✓		✓
Comprehensiveness supplement			✓	✓		✓
Payments for performance on cost, utilization, and/or quality metrics						
Performance-based Incentive Payments	✓		✓			✓
SSP payments (share of SSP ACO's payments that we allocated to the practice)		✓		✓		✓
Payments for services						
Traditional FFS payments	✓	✓	✓	✓	✓	✓
Alternative to FFS payments – Comprehensive Primary Care Payment			✓	✓	✓	✓

ACO = Accountable Care Organization; FFS = fee-for-service; SSP = Medicare Shared Savings Program.

- **CPC+ did not affect Medicare expenditures when excluding CMS' enhanced payments.** In both tracks, impact estimates were close to zero and were not statistically significant—$4 and $5 per beneficiary per month (PBPM) in Track 1 and Track 2, respectively. This was about 0.5 percent of the projected CPC+ mean (that is, what the CPC+ mean was projected to be in the absence of the initiative; Table 5.3). In line with these results, CPC+ and comparison practices in each track had similar quarterly trends in Medicare expenditures without CMS' enhanced payments before and after CPC+ began (Figure 5.1).

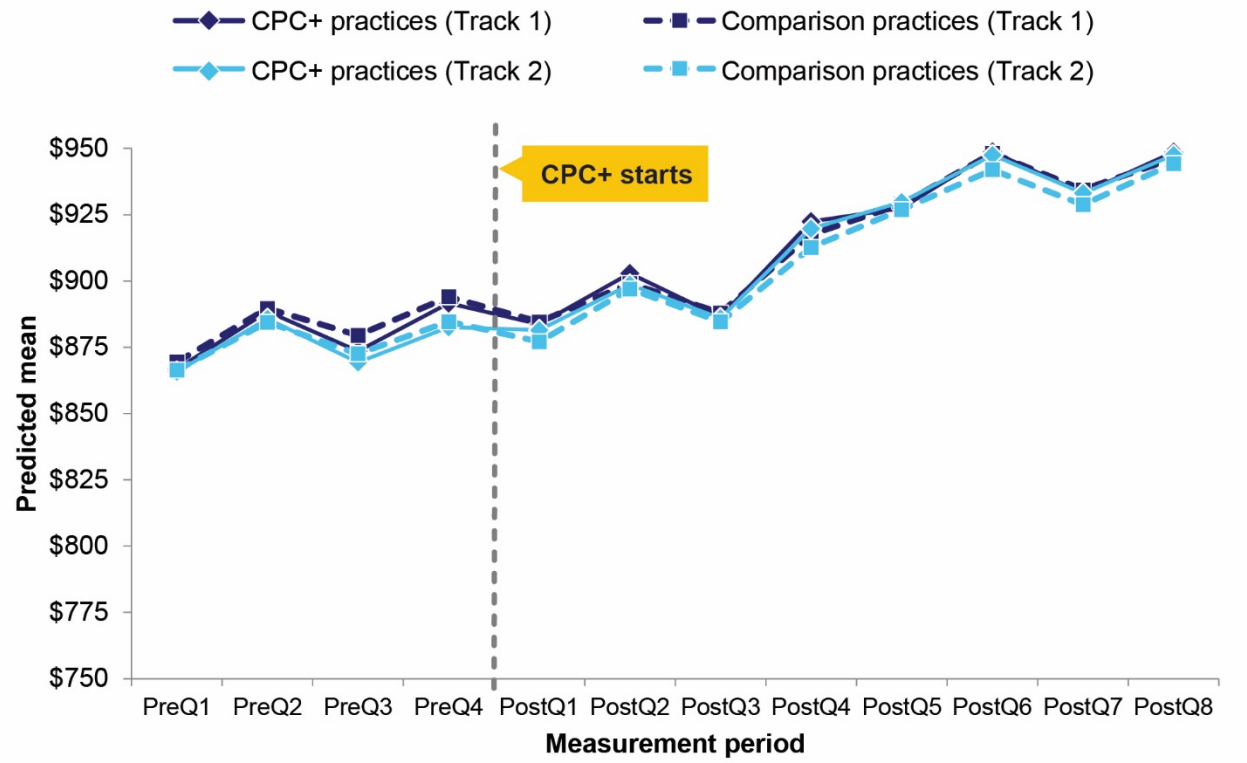
  The findings for each track were robust to various sensitivity tests and generally did not vary by beneficiary- or practice-level subgroup,[19] or by SSP status. However, we found limited evidence that CPC+ practices in both tracks that were owned by a hospital or health system increased expenditures without additional payments more than their counterparts in comparison practices, whereas independent practices had no statistically significant effect. Given the *preliminary* and *inconclusive* nature of this finding, we will continue examining these differences by type of practice ownership in future reports to see if more robust evidence emerges.

[19] We analyzed our findings to see if they varied for practices with different characteristics including practices' size, ownership status (hospital or system owned versus independent), type (multi-specialty versus primary care only), location (urban, rural, or suburban), and whether the practice had prior experience with primary care practice transformation.

We also analyzed our findings for certain subgroups of beneficiaries that have complex needs including patients at high risk for subsequent expenditures, patients who are either at high risk for subsequent expenditures or have dementia, patients with selected behavioral health conditions (schizophrenia, depression and bipolar disorders, or drug/alcohol psychosis or dependence), patients who have multiple chronic conditions and at least one hospitalization in the prior year, and patients who are dually eligible for Medicare and Medicaid. The last two groups were analyzed for claims-based outcomes only.

Figure 5.1. Quarterly trends in mean Medicare Part A and Part B expenditures PBPM, excluding CMS' enhanced payments, by track

For both tracks, CPC+ and comparison practices had similar trends in Medicare expenditures without CMS' enhanced payments before CPC+ began and in the first two years of CPC+.



Source: Mathematica's analyses of Medicare claims data from January 2013 through December 2018.

Notes: For CPC+ practices, the figure shows actual, unadjusted average expenditures for the attributed population. For comparison practices, the figure shows actual, unadjusted average expenditures in the baseline quarters and adjusted estimates of average expenditures in the intervention quarters. We obtained this adjusted mean by subtracting the regression-adjusted difference between the CPC+ and comparison means in each quarter (taken from the quarterly difference-in-differences model) from the CPC+ mean in that same quarter. We weighted the average expenditures using weights that account for (1) time observed in Medicare FFS for beneficiaries in both CPC+ and comparison practices, and (2) matching for beneficiaries in comparison practices. Medicare expenditures without CMS' enhanced payments include Comprehensive Primary Care Payments for Track 2 practices.

PBPM = per beneficiary per month.

- **When including CMS' enhanced payments, CPC+ increased costs for Medicare FFS beneficiaries.** Over the first two program years, Medicare expenditures, including CMS' care management fees (CMFs) and the comprehensiveness supplement for Track 2 practices, increased by $17 and $30 PBPM (1.8 and 3.3 percent), respectively, in Track 1 and Track 2 ($p < 0.01$ for each track). For each track, the estimated increase in these Medicare expenditures was slightly larger in size than the average CMF practices received for Medicare FFS beneficiaries. After including CMFs and payments for performance (PBIPs that practices retained and the shared savings payments made to their ACOs for practices that participated in SSP for both tracks), expenditures for Track 1 and Track 2 practices increased by $18 and $30 PBPM (1.9 and 3.3 percent), respectively, relative to comparison practices ($p < 0.01$ for each track). Figure 5.2 shows that the CMFs accounted for most of the total increase.

Figure 5.2. Per beneficiary per month impact estimate for Medicare expenditures during the first two program years, with CMS' enhanced payments, by track

CMFs accounted for the largest share of the increase in Medicare expenditures after including enhanced payments.

Source: Mathematica's analysis of Medicare claims data from January 2013 through December 2018.

Notes: The impact estimates on expenditures without enhanced payments ($3.6 in Track 1 and $4.9 in Track 2) were not statistically significant. The impact estimate including PBIPs and SSP payments is smaller for Track 2 than Track 1. This is because the change in the Track 2 impact estimate attributable to PBIPs was around $1.3 and the change for SSP payments was -$1.2 (that is, SSP payments that we allocated to CPC+ practices were lower than payments allocated to comparison practices by $1.2), resulting in an overall change of only about $0.1.

CMF = care management fee; PBIP = Performance-based Incentive Payment; PBPM = per beneficiary per month; SSP = Medicare Shared Savings Plan.

- **There was almost no chance that CPC+ was cost neutral in PY 1 and PY 2.** According to our Bayesian analysis, there was less than a 0.1 percent probability that savings in Medicare expenditures were large enough to offset the average CMFs practices received. And there was an even lower chance of offsetting *all* of CMS' enhanced payments made in addition to their payments for services (which includes PBIPs, SSP payments, and the comprehensiveness supplement, as well as CMFs).

5.1.3. Claims-based quality measures for Medicare FFS beneficiaries

Among the limited claims-based quality measures, CPC+ was associated with small improvements of one percentage point or less. These small improvements occurred in the areas of (1) planned care and population health measures—for recommended services among beneficiaries with diabetes and for breast cancer screening among women; and (2) a patient and caregiver engagement measure of receiving hospice services (Table 5.4). Regarding recommended services for diabetes, we found improvements in five measures for Track 2 practices (eye exam, attention for nephropathy, HbA1c testing, and the two composite measures—for receiving all three tests, and for not receiving any of the three tests). For Track 1 practices, we found improvements for all but one of these measures: HbA1c testing.

We found some *preliminary* evidence that CPC+ practices that do not participate in SSP had larger effects on quality of care than those that do participate in SSP. For Track 1, improvements in two measures for patients with diabetes (eye exam and receiving all three tests) and in breast cancer screening were significantly larger among non-SSP than SSP practices. This was also true for one of the diabetes measures (not receiving any of the three tests) and breast cancer screening among Track 2 practices.

However, given the limited set of claims-based quality measures examined, we cannot draw conclusions about the impact of CPC+ on quality. These findings will have more policy relevance if the estimated effects grow and we can conclude CPC+ improved the quality of care received by a substantial number of beneficiaries served by CPC+ practices.

5.1.4. Medicare FFS beneficiaries' experience of care

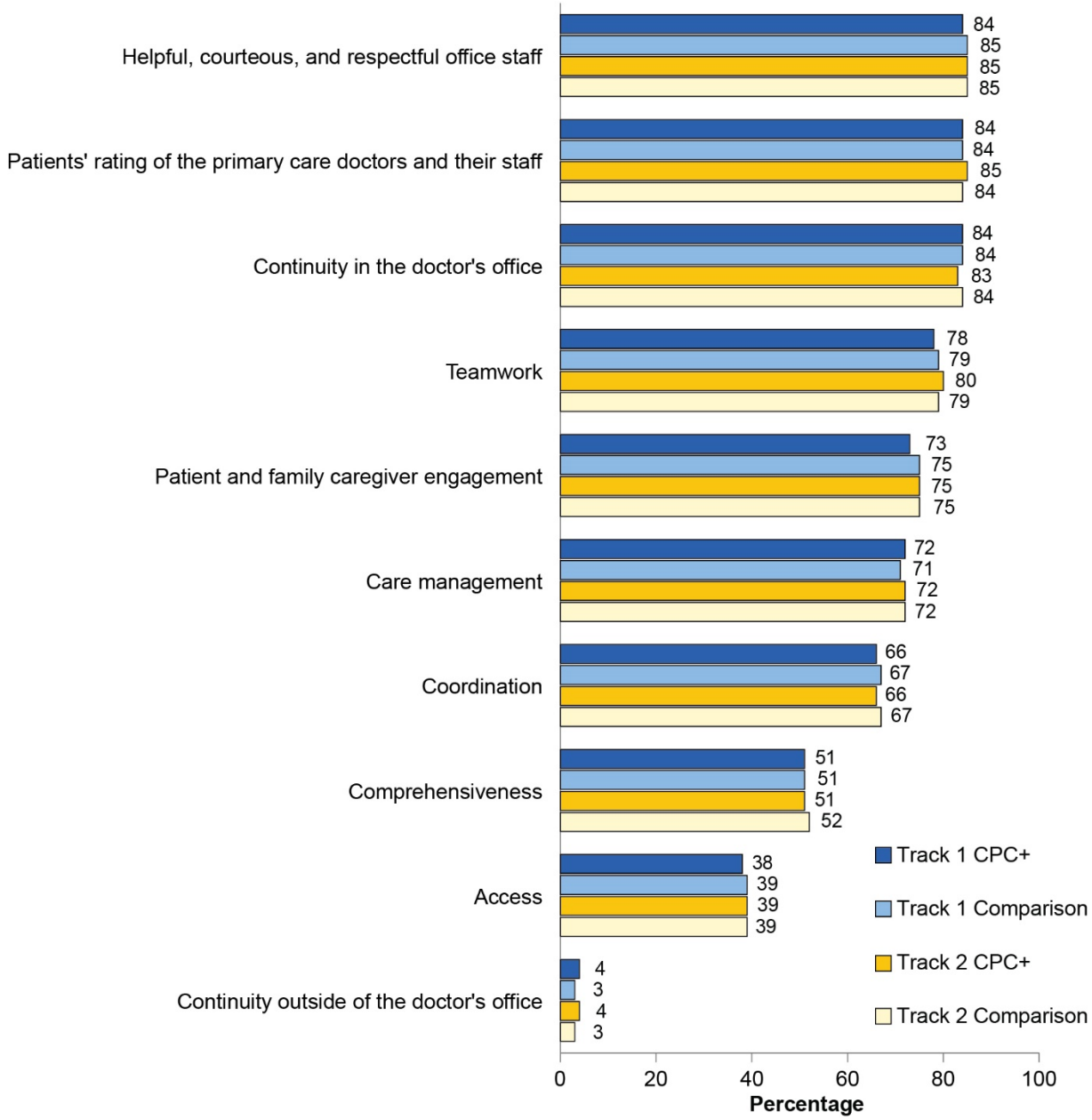
Medicare FFS beneficiaries in CPC+ and comparison practices reported generally similar experiences of care during PY 2. We analyzed each of the 39 survey items in the 2018 CPC+ Beneficiary Survey separately, and also grouped 37 of the survey items into 10 content areas based loosely on the Comprehensive Primary Care Functions and other topics that are important to CPC+.[20] CPC+ and comparison beneficiaries' experience did not differ meaningfully for any of these 10 composite measures (Figure 5.3). These findings did not differ based on practice or patient characteristics.

Moreover, patient-reported experience of care differed for only 3 of the 39 individual survey questions (individual survey items shown in Table 5.1 of the supplemental report). As described in Chapter 4, a higher proportion of CPC+ than comparison beneficiaries reported timely follow-up (1) after an ED visit (for Track 1 practices), (2) after a hospitalization (for Track 2 practices), and (3) in response to health questions asked outside regular office hours (for Track 2 practices).

[20] As described in the methods, composites do not map perfectly to the care delivery requirements, nor do they completely capture all aspects of the Comprehensive Primary Care Functions.

Figure 5.3. Percentage of Medicare FFS beneficiaries who gave the best response for 10 composite measures, for CPC+ practices and their comparison practices in PY 2

Beneficiaries in CPC+ Track 1, Track 2, and their respective comparison practices all gave similar ratings for 10 composite measures of care experience during CPC+'s second year.



Source: Mathematica's analysis of data from the independent evaluation's 2018 CPC+ Beneficiary Survey.

Note: Each outcome is regression adjusted.

Responses for these outcomes were not both statistically significantly different between CPC+ and comparison beneficiaries at the $p < 0.10$ level and meaningfully different (they were less than 5 percentage points).

5.2. Discussion of impact findings

During the first two program years, CPC+ had a few, very small favorable impacts on some measures of service use, quality of care, and patient experience, but (when including CMS' enhanced payments for CPC+ and SSP) it increased Medicare expenditures by 2 to 3 percent. These findings are largely consistent with findings from other studies, which found mixed results from practice transformation initiatives. (In Chapter 6 of the supplemental report, we list studies with favorable versus unfavorable results for various outcomes.) The impact findings are also consistent with our findings on how practices are implementing CPC+.

CPC+ practices have improved the way they deliver care; these changes could explain the following small favorable impacts of CPC+:

- **Reduced growth in ED visits.** CPC+ practices have increased the delivery of short-term, episodic care management, as required by CPC+, which involves timely outreach to patients after a hospital or ED discharge. Beneficiaries are reporting timelier follow-up after ED visits (Track 1). Practices are also educating patients about appropriate ED use, particularly for patients who have historically used the ED for nonurgent care. These process improvements could explain the small, favorable effects on ED visits in both tracks.
- **Slightly improved claims-based quality measures.** We know from interviews with deep-dive practices that CPC+ practices were working to improve planned care and population health in PY 2; CPC+ encouraged improvements in these areas, including in diabetes services and breast cancer screening, and CMS' performance-based payments incentivized practices to make them. Many deep-dive practices were using eCQMs, and some were using both eCQM and utilization data, to systematically guide QI activities. Moreover, more CPC+ practices reported having dedicated QI staff and using evidence-based QI strategies in PY2 than at the start of CPC+. Finally, the small increase in the percentage of beneficiaries receiving hospice services is consistent with reports by many deep-dive practices that they refined or expanded their advance care planning efforts after joining CPC+.

However, CPC+ practices still have work to do in the remaining years of CPC+, and face some systemic barriers to reducing expenditures. These factors may explain the lack of larger impacts in the first two program years. For example, only a small percentage of high-risk patients received longitudinal care management in PY 1 and PY 2. Deep-dive practices reported that they did not have sufficient care management staff to serve all patients with complex medical needs who would benefit from longitudinal care management, with several noting that they would hire additional care managers if more funding and a skilled workforce were available. Still, even if CPC+ practices fully achieve the Comprehensive Primary Care Functions, there could be important contextual factors that influence outcomes and are beyond a primary care practice's control. Markedly, specialists and hospitals operate in a largely FFS payment system; their incentives to deliver high volume, high cost care may need to be altered before CPC+ practices can reduce Medicare expenditures and achieve budget neutrality or savings.

It is too early to draw conclusions about the likely longer-term effects of CPC+ on Medicare expenditures, service use, quality, and patient experience. The persistence in favorable estimates for ED visits and selected quality-of-care measures for practices that joined CPC+ in 2017 from PY 1 to PY 2 is promising, but it is still early in the initiative to know whether CPC+ will ultimately improve key outcomes and reduce Medicare expenditures. In the absence of additional years of data, these early findings do not yet provide strong evidence of causal impacts from CPC+. Given other literature and the CPC+ model's theory of change, we did not necessarily expect to see favorable effects on expenditures, or sizable effects on other outcomes, in the first two program years. For patient experience, it may take time for patients to recognize differences in the care they receive—especially if they do not interact much with their practice—and patients may not readily perceive some changes. Future evaluation reports will track whether the small favorable effects of CPC+ on Medicare FFS beneficiaries will grow as the participating practices continue to implement CPC+, and as practice changes affect patients' health, service use, cost, and experience.

Table 5.3. Summary table of impacts (in percentages) on expenditures and service use measures for Medicare FFS beneficiaries over the first two program years, for 2017 Starters, by track and SSP participation status

	Track 1				Track 2			
	CPC+ annual mean in PY 1 and 2, overall	Percentage impacts, overall	Percentage impacts, SSP	Percentage impacts, non-SSP	CPC+ annual mean in PY 1 and 2, overall	Percentage impacts, overall	Percentage impacts, SSP	Percentage impacts, non-SSP
Medicare Part A and B expenditures (PBPM)								
Excluding enhanced CPC+ payments[a]	$921	0.4%	0.1%	0.8%	$919	0.5%	0.0%	***0.9%****
Including CPC+ CMFs[b]	$934	***1.8%****	***1.5%****	***2.2%****	$944	***3.3%****	***2.7%****	***3.8%****
Including CPC+ CMFs and PBIPs[b]	$934	***1.9%****	NA	***2.4%****	$946	***3.4%****	NA	***4.0%****
Including CPC+ CMFs, PBIPs, and shared savings payments to SSP ACOs[b]	$938	***1.9%****	***1.5%****[d]	NA	$947	***3.3%****	***2.4%****	NA
Medicare expenditures by service category (PBPM)								
Inpatient expenditures	$317	0.5%	0.0%	1.0%	$323	0.9%	-0.1%	***1.8%****
Expenditures on acute inpatient care[c]	$281	-0.1%	-0.7%	0.5%	$287	0.6%	-0.6%	***1.6%****
Outpatient expenditures	$187	0.6%	0.5%	0.7%	$188	0.2%	0.5%	-0.1%
Expenditures on physician and nonphysician Part B noninstitutional services in any setting	$265	0.2%	-0.2%	0.7%	$257	0.0%	***-1.0%****	***0.9%****
Expenditures on ambulatory visits with primary care practitioners	$25	-0.6%	-0.8%	-0.2%	$26	***2.3%****	***2.7%****	***2.0%****
Expenditures on ambulatory visits with specialists	$24	***0.6%****	0.3%	***1.1%****	$23	-0.3%	-0.7%	0.0%
Skilled nursing home expenditures	$64	0.2%	-0.2%	0.6%	$63	0.4%	1.8%	-1.0%
Home health expenditures	$39	***-2.1%****	***-2.4%****	***-1.8%****	$40	***-1.6%****	-1.3%	***-1.8%****
Hospice expenditures	$25	***5.7%****	***8.0%****	3.2%	$26	***6.0%****	***5.2%****	***6.6%****
Durable medical equipment expenditures	$22	-0.7%	***-2.5%****	1.2%	$21	1.7%	0.5%	***2.6%****
Service use (per 1,000 beneficiaries per year)								
Acute hospitalizations (short-stay acute care and CAHs)	286	-0.5%	-0.9%	-0.1%	290	-0.3%	0.0%	-0.6%
Outpatient ED visits, including observation stays	485	***-1.3%****	***-1.4%****	***-1.2%****	483	***-1.3%****	***-1.6%****	-1.0%
Ambulatory primary care visits (including to FQHCs, RHCs, and CAHs)	4,297	***-0.8%****	-0.6%	***-1.0%****	4,356	***-1.1%****	-0.7%	***-1.4%****
Ambulatory specialty care visits	4,220	***0.5%****	0.3%	***0.7%****	4,104	-0.1%	-0.6%	0.3%

Source: Mathematica's analysis of Medicare claims data from January 2013 through December 2018.

Table 5.3. ***(continued)***

Notes: We base impact estimates on a difference-in-differences analysis; they reflect the difference in the regression-adjusted average outcome for attributed Medicare FFS beneficiaries in CPC+ practices in PY 1 and PY 2 compared with the average outcome in the baseline year, relative to the same difference over time for attributed Medicare FFS beneficiaries in comparison practices. **Yellow shading** ***with bold, italicized text*** signifies that the underlying impact estimate (in dollars PBPM for expenditures and per 1,000 beneficiaries per year for service use) was statistically significant at the 10 percent level on a two-sided test. Expenditures on Part B noninstitutional services include expenditures on (1) ambulatory primary care visits, (2) ambulatory specialist visits, and (3) non-ambulatory physician visits as well as services provided by other noninstitutional providers (the third category is not shown separately). For Medicare service use, measures of outpatient ED visits and total ED visits include observation stays. Ambulatory visits with primary care practitioners and specialists include office-based visits and visits at home, as well as visits in other settings, such as FQHCs, RHCs, and CAHs.

This analysis includes (first number for Track 1 and second for Track 2): (1) 1,373 and 1,515 CPC+ practices (2) 5,243 and 3,783 comparison practices, (3) approximately 1.2 million and 1.4 million CPC+ beneficiaries, (4) approximately 4.0 and 3.4 million comparison beneficiaries, (5) approximately 2.8 million and 3.4 million CPC+ beneficiary-year observations and (6) approximately 9.2 and 7.8 million comparison beneficiary-year observations. After accounting for weights that adjust for matching and time observed in Medicare FFS, the effective sample sizes fall but are still substantial. For the comparison group, the effective sample size is 38 to 50 percent of the size of the actual comparison group. The effective sample size for the CPC+ group is about 96 percent of the actual sample size, because it is only affected by time observed (and not by the matching weights).

Although this table indicates which estimates are statistically significant, when we interpret evidence, we combine evidence from the magnitude of the effect, the *p*-values, findings on related outcomes, subgroups, sensitivity tests, and other data sources about model implementation.

[a] For Track 2 practices, Medicare Part A and B expenditures *without* enhanced CPC+ payments include the base CPCPs, but not the 10 percent comprehensiveness supplement. We include CPCPs in Part B spending because Track 2 practices agreed to lower Part B payment for evaluation and management services in exchange for CPCPs.

[b] For Track 2 practices, Medicare Part A and B expenditures *with* enhanced CPC+ payments include the base CPCPs, as well as the 10 percent comprehensiveness supplement.

[c] Acute inpatient care includes short-stay acute hospital admissions and admissions to critical access hospitals. Expenditures on non-acute hospital admissions, such as inpatient rehabilitation and psychiatric hospital admissions, are included in inpatient expenditures but not shown separately.

*/**/*** Underlying impact estimate in dollars PBPM for expenditures and per 1,000 beneficiaries per year for service use was significantly different from zero at the 0.10/0.05/0.01 level, two-tailed test.

NA = not applicable, because only CPC+ practices that participate in SSP are eligible to receive shared savings payments, and only non-SSP practices are eligible to receive Performance-based Incentive Payments.

ACO = Accountable Care Organization; CAH = Critical Access Hospital; CMF = care management fee; CPCP = Comprehensive Primary Care Payment; ED = emergency department; FFS = fee-for-service; FQHC = Federally Qualified Health Center; PBIP = Performance-based Incentive Payment; PBPM = per beneficiary per month; PY = Program Year; RHC = Rural Health Clinic; SSP = Medicare Shared Savings Program

Table 5.4. Summary table of impacts (in percentage points) on claims-based quality-of-care measures for Medicare FFS beneficiaries over the first two program years, for 2017 Starters, by track and SSP participation status

	Track 1				Track 2			
	CPC+ annual mean in PY 1 and 2, overall	Impact estimates (percentage points), overall	Impact estimates (percentage points), SSP	Impact estimates (percentage points), non-SSP	CPC+ annual mean in PY 1 and 2, overall	Impact estimates (percentage points), overall	Impact estimates (percentage points), SSP	Impact estimates (percentage points), non-SSP
Planned care and population health measures for beneficiaries ages 18–75 with diabetes								
Received HbA1c test	91.2%	0.1	0.3	-0.1	92.8%	***0.3****	0.2	***0.4****
Received eye exam	65.2%	***1.0*****	0.2	***1.8*****	66.6%	***0.6****	0.4	***0.7****
Received attention for nephropathy	82.1%	***0.8*****	***0.6****	***1.0*****	83.7%	***0.6****	0.2	***0.9*****
Diabetes composite measure 1 (received all three tests above: HbA1c test, eye exam, attention for nephropathy)	53.0%	***1.1*****	0.4	***1.8*****	55.7%	***0.9*****	0.7	***1.0*****
Diabetes composite measure 2 (received none of the three tests above)	2.3%	***-0.2*****	***-0.2****	***-0.2****	2.0%	***-0.1****	0.0	***-0.3*****
Planned care and population health measures for female beneficiaries ages 52–74								
Received breast cancer screening	70.0%	***0.7*****	0.2	***1.3*****	72.2%	***0.7*****	0.3	***1.0*****
Care coordination measures								
Percentage of discharges that had a 30-day all-cause unplanned readmission	15.8%	0.2	0.2	0.1	15.8%	0.0	0.2	-0.2
Patient and caregiver engagement measures								
Received hospice services	2.8%	***0.1****	***0.1*****	0.0	2.9%	***0.1*****	0.0	***0.1*****

Source: Mathematica's analysis of Medicare claims data from January 2013 through December 2018.

Notes: We base impact estimates on a difference-in-differences analysis; they reflect the difference in the regression-adjusted average outcome for attributed Medicare FFS beneficiaries in CPC+ practices in PY 1 and PY 2 compared with the average outcome in the baseline year, relative to the same difference over time for attributed Medicare FFS beneficiaries in comparison practices. **Yellow shading** ***with bold, italicized text*** signifies that an estimate was statistically significant at the 10 percent level on a two-sided test. For the readmissions outcome, which is estimated at the discharge level, we also controlled for discharge-level risk factors. For the binary quality-of-care outcomes, we present the absolute impact estimate on the relevant measures only in percentage points. We do so because percentage impacts for some of the measures are likely to be misleadingly large, given the low means for the measures. We grouped the claims-based quality-of-care measures into four domains according to the CPC+ function where they are covered in the 2018 implementation Guide (CMMI 2018).

For the planned care and population health measures for beneficiaries ages 18–75 with diabetes, the analysis includes (first number for Track 1 and second for Track 2), approximately (1) 187,000 and 226,000 CPC+ beneficiaries, (2) 627,000 and 520,000 comparison beneficiaries, (3) 382,000 and 462,000 CPC+ beneficiary-year observations, and (4) 1.3 million and 1.1 million comparison beneficiary-year observations. For the breast cancer screening measure for female beneficiaries ages 52–74, the analysis includes (first number for Track 1 and second for Track 2), approximately (1) 304,000 and 365,000 CPC+ beneficiaries, (2) 999,000 and 838,000 comparison beneficiaries, (3) 629,000 and 755,000 CPC+ beneficiary-year observations, and (4) 2.1 million and 1.7 million comparison beneficiary-year observations. For the 30-day readmissions measure, the analysis includes (first number for Track 1 and second for Track 2), approximately (1) 683,000 and 838,000 index discharges for CPC+ practices and (2) 2.2 million and 1.9 million index discharges for comparison practices. The sample sizes for the use of hospice services measure as well as the number of CPC+ and comparison practices in each track for all measures, are the same as in Table 5.2. After accounting for weights that adjust for matching and time observed in

Table 5.4. ***(continued)***

Medicare FFS, the effective sample sizes fall but are still substantial. For the comparison group, the effective sample size is 38 to 52 percent of the size of the actual comparison group. The effective sample size for the CPC+ group is about 95 to 99 percent of the actual sample size, because it is affected only by time observed (and not by the matching weights). For the analysis of unplanned 30-day readmissions, we only use matching weights—therefore, the effective sample size for the number of index discharges shown in the table is smaller by about 39 to 52 percent for the comparison group only.

Although this table indicates which estimates are statistically significant, when we interpret evidence, we combine evidence from the magnitude of the effect, the *p*-values, findings on related outcomes, subgroups, sensitivity tests, and other data sources about model implementation.

*/**/*** Significantly different from zero at the 0.10/0.05/0.01 level, two-tailed test.

FFS = fee-for-service; PY = Program Year; SSP = Medicare Shared Savings Program.

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